

# **APPENDIX C**

# LABORATORY REPORTS AND CHAIN OF CUSTODY DOCUMENTATION



September 22, 2004

Therese Watson PW Environmental 230 Dove Court Santa Paula, CA 93060

RE: Bauer

Dear Therese:

Enclosed are the results of the samples submitted to our laboratory on September 10, 2004. For your reference, these analyses have been assigned our service request number L0401901.

All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed. Columbia Analytical Services is not responsible for use of less than the complete report. Your report contains 38 pages.

Columbia Analytical Services is certified for environmental analyses by the California Department of Health Services (certificate number: 1296A); NELAP (certificate number: 02115CA); Los Angeles County Laboratory ID (No. 10151); and Arizona Department of Health Services (License number: AZ0136 and AZ0544).

If you have any questions, please call me at (818) 587-5550, extension 310.

Respectfully submitted,

Columbia Analytical Services, Inc.

Stuart Sigman

**Project Chemist** 

SS/sa

## Columbia Analytical Services, Inc.

#### Acronyms

8015M California DHS LUFT Method

ASTM American Society for Testing and Materials

BOD Biochemical Oxygen Demand

BTEX Benzene/Toluene/Ethylbenzene/Xylenes

CAM California Assessment Metals

CAS Number Chemical Abstract Service Registry Number

CFC Chlorofluorocarbon
COD Chemical Oxygen Demand
CRDL Contract Required Detection Limit
Detected; result must be greater than zero.

DL Detected; result must be greater than the detection limit.

DLCS Duplicate Laboratory Control Sample

DMS Duplicate Matrix Spike
DOH or DHS Department of Health Services

ELAP Environmental Laboratory Accreditation Program

EPA U.S. Environmental Protection Agency

GC Gas Chromatography

GC/MS Gas Chromatography/Mass Spectrometry

IC Ion Chromatography

ICB Initial Calibration Blank sample

ICP Inductively Coupled Plasma atomic emission spectrometry

ICV Initial Calibration Verification sample

LUFT Laboratory Control Sample
LUFT Leaking Underground Fuel Tank

M Modified

MBAS Methylene Blue Active Substances

MDL Method Detection Limit
MRL Method Reporting Limit

MS Matrix Spike

MTBE Methyl-tert-Butyl Ether

NA Not Applicable NC Not Calculated

ND None Detected at or above the Method Reporting/Detection Limit (MRL/MDL)

NTU Nephelometric Turbidity Units

ppb Parts Per Billion ppm Parts Per Million

PQL Practical Quantitation Limit
QA/QC Quality Assurance/Quality Control
RCRA Resource Conservation and Recovery Act

RPD Relative Percent Difference SIM Selected Ion Monitoring

SM Standard Methods for the Examination of Water and Wastewater 18th Ed., 1992.

STLC Solubility Threshold Limit Concentration

SW Test Methods for Evaluating Solid Waste, Physical/Chemical MethodsSW-846,

Third Edition, 1986 and as amended by Updates I, II, IIA, and IIB.

TCLP Toxicity Characteristics Leaching Procedure

TDS Total Dissolved Solids
TPH Total Petroleum Hydrocarbons

TRPH Total Recoverable Petroleum Hydrocarbons

TSS Total Suspended Solids

TTLC Total Threshold Limit Concentration

VOA Volatile Organic Analyte(s)

#### Qualifiers

U Undetected at or above MDL/MRL (PQL).

J Estimated concentration. Analyte detected above MDL but below MRL (PQL).

B Hit above MRL (PQL) also found in Method Blank.
E Analyte concentration above high point of ICAL.

D Result from dilution.X See case narrative.

Client:

PW Environmental

Service Request No.: L0401901

Project:

Bauer

Date Received:

9/10/04

Sample Matrix:

Soil

#### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS).

#### Sample Receipt

The samples were received for analysis at Columbia Analytical Services on 9/10/04. No discrepancies were noted upon initial sample inspection. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored at 4°C/frozen at -20°C upon receipt at the laboratory.

#### Volatile Organic Compounds by EPA Method 8260B

Samples BX-2, BX-5, BX-6 and BX-7 were extracted in Methanol and analyzed as medium level due to the presence of elevated levels of non-target background component. The reporting limits are adjusted to reflect the dilution.

The control criterion was exceeded for the 4-Bromofluorobenzene surrogates in sample BX-3 due to matrix interferences. Due to the presence of non-target background components that prevented adequate resolution of the surrogate, accurate quantitation was not possible. No further corrective action was appropriate.

#### Gasoline Range Organics by EPA Method 8015M

Samples BX-2, BX-3, BX-5, BX-6 and BX-7 were extracted in Methanol and analyzed a medium level due to the presence of elevated levels of target analyte. Further dilution was also necessary; therefore the reporting limits are adjusted to reflect the dilution.

The control criteria for the 4-Bromofluorobenzene surrogates in the above samples are not applicable. The chromatogram indicated the presence of target components that masked the surrogate, which prevented adequate resolution for quantitation. No corrective action was appropriate. All other QA/QC results were within the control criteria, which indicate that the analytical batch was in control. No further corrective action was taken.

#### Total Metals

No anomalies were encountered. No STLC was required.

Approved by	55	Date	9/22/04
			<del></del>

Client: Project: PW Environmental .

Bauer

Service Request:

L0401901

Cover Page - Organic Analysis Data Package **Volatile Organic Compounds** 

		Date	Date
Sample Name	Lab Code	Collected	Received
BX-2	L0401901-001	09/10/2004	09/10/2004
BX-3	L0401901-002	09/10/2004	09/10/2004
BX-4	L0401901-003	09/10/2004	09/10/2004
BX-5	L0401901-004	09/10/2004	09/10/2004
BX-6	L0401901-005	09/10/2004	09/10/2004
BX-7	L0401901-006	09/10/2004	09/10/2004
BX-8	L0401901-007	09/10/2004	09/10/2004

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Name: Swart Syman

Title: Roject Chmist

Cover Page - Organic

Page

1 of

SuperSet Reference: RR7270

Analytical Results

Client:

PW Environmental

Project: Sample Matrix: Bauer

Soil

Service Request: L0401901

Date Collected: 09/10/2004

**Date Received:** 09/10/2004

## **Volatile Organic Compounds**

Sample Name:

BX-2

Lab Code:

L0401901-001

Units: ug/Kg Basis: Wet

Extraction Method:

EPA 5035

Level: Med

Analysis Method:

8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	160	16	1	09/16/04	09/16/04	LWG0403329	
Toluene	ND U	160	14	1	09/16/04	09/16/04	LWG0403329	
Ethylbenzene	1900	160	20	1	09/16/04	09/16/04	LWG0403329	
Total Xylenes	490	480	36	1	09/16/04	09/16/04	LWG0403329	
Methyl tert-Butyl Ether	ND U	400	39	1	09/16/04	09/16/04	LWG0403329	
tert-Butyl Alcohol	ND U	2000	1000	1	09/16/04	09/16/04	LWG0403329	
Diisopropyl Ether	ND U	400	47	1	09/16/04	09/16/04	LWG0403329	
tert-Butyl Ethyl Ether	ND U	400	39	1	09/16/04	09/16/04	LWG0403329	
tert-Amyl Methyl Ether	ND U	400	45	1	09/16/04	09/16/04	LWG0403329	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Dibromofluoromethane	100	65-131	09/16/04	Acceptable	
Toluene-d8	103	62-131	09/16/04	Acceptable	
4-Bromofluorobenzene	83	54-129	09/16/04	Acceptable	

Comments:

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1 of 1

Analytical Results

Client:

PW Environmental

Project: Sample Matrix: Bauer Soil • .

**Date Collected:** 09/10/2004 **Date Received:** 09/10/2004

Volatile Organic Compounds

Sample Name:

BX-3

Lab Code:

L0401901-002

Extraction Method:

EPA 5035

Units: ug/Kg

Basis: Wet

Level: Low

Analysis Method:

8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	4.8	1.2	1	09/15/04	09/15/04	LWG0403327	
Toluene	ND U	4.8	1.3	1	09/15/04	09/15/04	LWG0403327	
Ethylbenzene	ND U	4.8	1.1	1	09/15/04	09/15/04	LWG0403327	
Total Xylenes	ND U	14	3.3	1	09/15/04	09/15/04	LWG0403327	
Methyl tert-Butyl Ether	ND U	9.5	2.7	1	09/15/04	09/15/04	LWG0403327	
tert-Butyl Alcohol	ND U	48	26	1	09/15/04	09/15/04	LWG0403327	
Diisopropyl Ether	ND U	9.5	2.8	1	09/15/04	09/15/04	LWG0403327	
tert-Butyl Ethyl Ether	ND U	9.5	2.5	1	09/15/04	09/15/04	LWG0403327	
tert-Amyl Methyl Ether	ND U	9.5	2.5	1	09/15/04	09/15/04	LWG0403327	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	90	74-126	09/15/04	Acceptable
Toluene-d8	97	79-122	09/15/04	Acceptable
4-Bromofluorobenzene	125	74-116	09/15/04	Outside Control Limits

Comments:

RR7270

**Analytical Results** 

Client:

PW Environmental

Project:
Sample Matrix:

Bauer Soil Service Request: L0401901

Date Collected: 09/10/2004

**Date Received:** 09/10/2004

## **Volatile Organic Compounds**

Sample Name:

BX-4

Lab Code:

L0401901-003

Extraction Method:

EPA 5035

Units: ug/Kg
Basis: Wet

Level: Low

Analysis Method:

8260B

Analyte Name	Result	Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	4.1	1.2	1	09/15/04	09/15/04	LWG0403327	
Toluene	ND	U	4.1	1.3	1	09/15/04	09/15/04	LWG0403327	
Ethylbenzene	ND	U	4.1	1.1	1	09/15/04	09/15/04	LWG0403327	
Total Xylenes	ND	U	12	3.3	1	09/15/04	09/15/04	LWG0403327	
Methyl tert-Butyl Ether	ND	U	8.2	2.7	1	09/15/04	09/15/04	LWG0403327	
tert-Butyl Alcohol	ND	U	41	26	1	09/15/04	09/15/04	LWG0403327	
Diisopropyl Ether	ND	U	8.2	2.8	1	09/15/04	09/15/04	LWG0403327	. ——
tert-Butyl Ethyl Ether	ND	Ŭ	8.2	2.5	1	09/15/04	09/15/04	LWG0403327	
tert-Amyl Methyl Ether	ND	U	8.2	2.5	1	09/15/04	09/15/04	LWG0403327	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	95	74-126	09/15/04	Acceptable
Toluene-d8	105	79-122	09/15/04	Acceptable
4-Bromofluorobenzene	95	74-116	09/15/04	Acceptable

Comments:

Analytical Results

Client:

PW Environmental

Project: Sample Matrix: Bauer Soil

Service Request: L0401901 Date Collected: 09/10/2004

**Date Received:** 09/10/2004

## **Volatile Organic Compounds**

Sample Name:

BX-5

Lab Code:

L0401901-004

**Extraction Method:** Analysis Method:

EPA 5035 8260B

Units: ug/Kg Basis: Wet

Level: Med

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	170	16	1	09/16/04	09/16/04	LWG0403329	
Toluene	ND U	170	14	1	09/16/04	09/16/04	LWG0403329	
Ethylbenzene	ND U	170	20	1	09/16/04	09/16/04	LWG0403329	
Total Xylenes	ND U	510	36	1	09/16/04	09/16/04	LWG0403329	
Methyl tert-Butyl Ether	ND U	430	39	1	09/16/04	09/16/04	LWG0403329	
tert-Butyl Alcohol	ND U	2200	1000	1	09/16/04	09/16/04	LWG0403329	
Diisopropyl Ether	ND U	430	47	1	09/16/04	09/16/04	LWG0403329	
tert-Butyl Ethyl Ether	ND U	430	39	1	09/16/04	09/16/04	LWG0403329	
tert-Amyl Methyl Ether	ND U	430	45	1	09/16/04	09/16/04	LWG0403329	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	90	65-131	09/16/04	Acceptable
Toluene-d8	99	62-131	09/16/04	Acceptable
4-Bromofluorobenzene	88	54-129	09/16/04	Acceptable

Comments:

RR7270

Analytical Results

Client:

PW Environmental

Project: Sample Matrix: Bauer Soil

Service Request: L0401901 Date Collected: 09/10/2004

Date Received: 09/10/2004

## **Volatile Organic Compounds**

Sample Name:

**BX-6** 

Lab Code:

Extraction Method: Analysis Method:

L0401901-005

EPA 5035 8260B

Units: ug/Kg

Basis: Wet

Level: Med

Analyte Name	Result	Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	180	16	1	09/16/04	09/16/04	LWG0403329	
Toluene	ND	U	180	14	1	09/16/04	09/16/04	LWG0403329	
Ethylbenzene	ND	U	180	20	1	09/16/04	09/16/04	LWG0403329	
Total Xylenes	ND	U	540	36	1	09/16/04	09/16/04	LWG0403329	
Methyl tert-Butyl Ether	ND	U	450	39	1	09/16/04	09/16/04	LWG0403329	
tert-Butyl Alcohol	ND	U	2300	1000	1	09/16/04	09/16/04	LWG0403329	
Diisopropyl Ether	ND		450	47	1	09/16/04	09/16/04	LWG0403329	
tert-Butyl Ethyl Ether	ND	U	450	39	1	09/16/04	09/16/04	LWG0403329	
tert-Amyl Methyl Ether	ND	U	450	45	1	09/16/04	09/16/04	LWG0403329	

Surrogate Name	%Rec	' Control Limits	Date Analyzed	Note
Dibromofluoromethane	84	65-131	09/16/04	Acceptable
Toluene-d8	94	62-131	09/16/04	Acceptable
4-Bromofluorobenzene	91	54-129	09/16/04	Acceptable

Comments:

Analytical Results

Client:

PW Environmental

Project: Sample Matrix: Bauer Soil

Service Request: L0401901 Date Collected: 09/10/2004

Date Received: 09/10/2004

Volatile Organic Compounds

Sample Name:

BX-7

Lab Code:

L0401901-006

Extraction Method: Analysis Method:

EPA 5035 8260B

Units: ug/Kg Basis: Wet

Level: Med

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	180	16	1	09/16/04	09/16/04	LWG0403329	
Toluene	ND U	180	14	1	09/16/04	09/16/04	LWG0403329	
Ethylbenzene	ND U	180	20	1	09/16/04	09/16/04	LWG0403329	
Total Xylenes	ND U	540	36	. 1	09/16/04	09/16/04	LWG0403329	
Methyl tert-Butyl Ether	ND U	440	39	1	09/16/04	09/16/04	LWG0403329	
tert-Butyl Alcohol	ND U	2200	1000	1	09/16/04	09/16/04	LWG0403329	
Diisopropyl Ether	ND U	440	47	1	09/16/04	09/16/04	LWG0403329	
tert-Butyl Ethyl Ether	ND U	440	39	1	09/16/04	09/16/04	LWG0403329	
tert-Amyl Methyl Ether	ND U	440	45	1	09/16/04	09/16/04	LWG0403329	

Surrogate Name	%Rec	' Control Limits	Date Analyzed	Note	
Dibromofluoromethane	91	65-131	09/16/04	Acceptable	
Toluene-d8	98	62-131	09/16/04	Acceptable	
4-Bromofluorobenzene	97	54-129	09/16/04	Acceptable	

Comments:

SuperSet Reference:

Analytical Results

Client:

PW Environmental

Project: Sample Matrix: Bauer

Soil

Service Request: L0401901

Date Collected: 09/10/2004

Date Received: 09/10/2004

Volatile Organic Compounds

Sample Name:

BX-8

Lab Code:

L0401901-007

**Extraction Method:** 

EPA 5035

Units: ug/Kg Basis: Wet

Analysis Method:

8260B

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	4.3	1.2	1	09/15/04	09/15/04	LWG0403327	
Toluene	ND U	4.3	1.3	1	09/15/04	09/15/04	LWG0403327	
Ethylbenzene	ND U	4.3	1.1	1	09/15/04	09/15/04	LWG0403327	
Total Xylenes	ND U	13	3.3	1	09/15/04	09/15/04	LWG0403327	
Methyl tert-Butyl Ether	ND U	8.5	2.7	1	09/15/04	09/15/04	LWG0403327	
tert-Butyl Alcohol	ND U	43	26	1	09/15/04	09/15/04	LWG0403327	
Diisopropyl Ether	ND U	8.5	2.8	1	09/15/04	09/15/04	LWG0403327	
tert-Butyl Ethyl Ether	ND U	8.5	2.5	1	09/15/04	09/15/04	LWG0403327	
tert-Amyl Methyl Ether	ND U	8.5	2.5	1	09/15/04	09/15/04	LWG0403327	

Surrogate Name	%Rec	' Control Limits	Date Analyzed	Note	
Dibromofluoromethane	86	74-126	09/15/04	Acceptable	
Toluene-d8	95	79-122	09/15/04	Acceptable	
4-Bromofluorobenzene	87	74-116	09/15/04	Acceptable	

Comments:

Analytical Results

Client:

PW Environmental

Project: Sample Matrix: Bauer Soil

Service Request: L0401901

Date Collected: NA Date Received: NA

Volatile Organic Compounds

Sample Name: Lab Code:

Method Blank

Units: ug/Kg Basis: Wet

Extraction Method: EPA 5035

LWG0403327-3

Level: Low

nalysis	Method:	8260E
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В

	D 11 0	DOL	MDY	Dilution	Date	Date	Extraction	Mata
Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Benzene	ND U	5.0	1.2	1	09/15/04	09/15/04	LWG0403327	
Toluene	ND U	5.0	1.3	1	09/15/04	09/15/04	LWG0403327	
Ethylbenzene	ND U	5.0	1.1	1	09/15/04	09/15/04	LWG0403327	
Total Xylenes	ND U	15	3.3	1	09/15/04	09/15/04	LWG0403327	
Methyl tert-Butyl Ether	ND U	10	2.7	1	09/15/04	09/15/04	LWG0403327	
tert-Butyl Alcohol	ND U	50	26	1	09/15/04	09/15/04	LWG0403327	
Diisopropyl Ether	ND U	10	2.8	1	09/15/04	09/15/04	LWG0403327	
tert-Butyl Ethyl Ether	ND U	10	2.5	1	09/15/04	09/15/04	LWG0403327	
tert-Amyl Methyl Ether	ND U	10	2.5	1	09/15/04	09/15/04	LWG0403327	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	95	74-126	09/15/04	Acceptable
Toluene-d8	105	79-122	09/15/04	Acceptable
4-Bromofluorobenzene	95	74-116	09/15/04	Acceptable

Comments:

Analytical Results

Client:

PW Environmental

Project: Sample Matrix: Bauer

Soil

Service Request: L0401901

Date Collected: NA Date Received: NA

## **Volatile Organic Compounds**

Sample Name:

Method Blank

Lab Code:

LWG0403329-3

Extraction Method: EPA 5030B

Analysis Method:

8260B

Units: ug/Kg Basis: Wet

Level: Med

Analyte Name	Result	Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	200	16	1	09/16/04	09/16/04	LWG0403329	
Toluene	ND	U	200	14	1	09/16/04	09/16/04	LWG0403329	
Ethylbenzene	ND	U	200	20	1	09/16/04	09/16/04	LWG0403329	
Total Xylenes	ND	U	600	36	1	09/16/04	09/16/04	LWG0403329	
Methyl tert-Butyl Ether	ND	U	500	39	1	09/16/04	09/16/04	LWG0403329	
tert-Butyl Alcohol	ND	U	2500	1000	1	09/16/04	09/16/04	LWG0403329	
Diisopropyl Ether	ND	U	500	47	<u> </u>	09/16/04	09/16/04	LWG0403329	
tert-Butyl Ethyl Ether	ND	U	500	39	1	09/16/04	09/16/04	LWG0403329	
tert-Amyl Methyl Ether	ND	U	500	45	i	09/16/04	09/16/04	LWG0403329	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Dibromofluoromethane	100	65-131	09/16/04	Acceptable	
Toluene-d8	100	62-131	09/16/04	Acceptable	
4-Bromofluorobenzene	98	54-129	09/16/04	Acceptable	

Comments:

Merged

QA/QC Report

Client:

PW Environmental

Project:

Bauer

Sample Matrix:

Soil

**Surrogate Recovery Summary** 

104

113

101

**Extraction Method:** 

Duplicate Lab Control Sample

EPA 5035

Analysis Method:

8260B

Volatile Organic Compounds

Service Request: L0401901

Units: PERCENT

Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	
BX-3	L0401901-002	90	97	125	*
BX-4	L0401901-003	95	105	95	
BX-8	L0401901-007	86	95	87	
Method Blank	LWG0403327-3	95	105	95	
Lab Control Sample	LWG0403327-1	109	99	97	

LWG0403327-2

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	74-126
Sur2	=	Toluene-d8	79-122
Sur3	=	4-Bromofluorobenzene	74-116

Results flagged with an asterisk (\*) indicate values outside control criteria. Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:

PW Environmental

Project:

Bauer

Sample Matrix:

Soil

**Surrogate Recovery Summary Volatile Organic Compounds** 

Extraction Method:

EPA 5035

Analysis Method:

8260B

Service Request: L0401901

Units: PERCENT

Level: Med

Sample Name	Lab Code	Sur1	Sur2	<u>Sur3</u>
BX-2	L0401901-001	100	103	83
BX-5	L0401901-004	90	99	88
BX-6	L0401901-005	84	94	91
BX-7	L0401901-006	91	98	97
Method Blank	LWG0403329-3	100	100	98
Lab Control Sample	LWG0403329-1	97	99	102
Duplicate Lab Control Sample	LWG0403329-2	98	100	102

Surrogate Recovery Control Limits (%)

Surl =	Dibromofluoromethane	65-131
Sur2 =	Toluene-d8	62-131
Sur3 =	4-Bromofluorobenzene	54-129

Results flagged with an asterisk (\*) indicate values outside control criteria. Results flagged with a pound (#) indicate the control criteria is not applicable.

Page

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QA/QC Report

Client:

PW Environmental

Project: Sample Matrix: Bauer

Soil

Service Request: L0401901 Date Extracted: 09/15/2004

**Date Analyzed:** 09/15/2004

## Lab Control Spike/Duplicate Lab Control Spike Summary Volatile Organic Compounds

**Extraction Method:** Analysis Method:

8260B

EPA 5035

Units: ug/Kg Basis: Wet

Level: Low Extraction Lot: LWG0403327

Lab Control Sample

Duplicate Lab Control Sample

		/G0403327-1 Control Spik		LWG0403327-2 Duplicate Lab Control Spike			%Rec		RPD	
Analyte Name	Result	Expected	%Rec	Result	Expected	%Rec	Limits	RPD	Limit	
Benzene	15.0	20.0	75	16.6	20.0	83	70-130	10	30	
Toluene	16.3	20.0	81	17.7	20.0	88	70-130	8	30	
Ethylbenzene	15.6	20.0	78	17.0	20.0	85	70-130	8	30	
Total Xylenes	47.9	60.0	80	51.7	60.0	86	70-130	8	30	
Methyl tert-Butyl Ether	34.7	40.0	87	, 37.4	40.0	94	70-130	7	30	
tert-Butyl Alcohol	340	400	85	384	400	96	70-130	12	30	
Diisopropyl Ether	31.8	40.0	80	35.2	40.0	88	70-130	10	30	
tert-Butyl Ethyl Ether	33.7	40.0	84	38.2	40.0	95	70-130	13	30	
tert-Amyl Methyl Ether	33.4	40.0	84	36.3	40.0	91	70-130	8	30	

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:

PW Environmental

Project: Sample Matrix: Bauer

Soil

Service Request: L0401901

Date Extracted: 09/16/2004

**Date Analyzed:** 09/16/2004

Lab Control Spike/Duplicate Lab Control Spike Summary **Volatile Organic Compounds** 

Extraction Method: Analysis Method:

EPA 5030B

8260B

Units: ug/Kg Basis: Wet

Level: Med

Extraction Lot: LWG0403329

Lab Control Sample

LWG0403329-1

**Duplicate Lab Control Sample** LWG0403329-2

		Control Spik	e	Duplicate Lab Control Spike			%Rec		RPD	
Analyte Name	Result	Expected	%Rec	Result	Expected	%Rec	Limits	RPD	Limit	
Benzene	901	1000	90	1000	1000	100	87-120	11	30	
Toluene	922	1000	92	1030	1000	103	88-125	11	30	
Ethylbenzene	926	1000	93	1040	1000	104	87-121	12	30	
Total Xylenes	2860	3000	95	3220	3000	107	85-125	12	30	
Methyl tert-Butyl Ether	1840	2000	92	1940	2000	97	73-128	6	30	

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Project: PW Environmental

Bauer

Service Request:

L0401901

Cover Page - Organic Analysis Data Package Gasoline Range Organics (GRO)

		Date	Date
Sample Name	Lab Code	Collected	Received
BX-2	L0401901-001	09/10/2004	09/10/2004
BX-3	L0401901-002	09/10/2004	09/10/2004
BX-4	L0401901-003	09/10/2004	09/10/2004
BX-5	L0401901-004	09/10/2004	09/10/2004
BX-6	L0401901-005	09/10/2004	09/10/2004
BX-7	L0401901-006	09/10/2004	09/10/2004
BX-8	L0401901-007	09/10/2004	09/10/2004

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Name: Stuart Sigman

Title: Roject Chemist

18

Cover Page - Organic

RR7271

**Analytical Results** 

Client:

PW Environmental

Project:

Bauer

Sample Matrix:

Soil

Service Request: L0401901

Date Collected: 09/10/2004

Date Received: 09/10/2004

## Gasoline Range Organics (GRO)

Sample Name:

BX-2

Lab Code:

L0401901-001

Extraction Method:

EPA 5030B

Analysis Method:

8015B

Units: mg/Kg

Basis: Wet

Level: Med

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Lot	Note
Gasoline	330 D	8.5	4.6	2	09/16/04	09/16/04	LWG0403305	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	0	62-133	09/16/04	Outside Control Limits	

Analytical Results

Client:

PW Environmental

Project:

Bauer

Soil

Service Request: L0401901

Date Collected: 09/10/2004

**Date Received:** 09/10/2004

Gasoline Range Organics (GRO)

Sample Name:

Sample Matrix:

BX-3

Lab Code:

L0401901-002

**Extraction Method:** Analysis Method:

EPA 5030B

8015B

Units: mg/Kg

Basis: Wet

Level: Med

Dilution Date Date Extraction **Factor Extracted** Analyzed Lot Note **PQL MDL** Analyte Name Result Q LWG0403305 **290** D 9.1 4.6 2 09/16/04 09/16/04 Gasoline

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	0	62-133	09/16/04	Outside Control Limits

Comments:

Printed: 09/21/2004 10:19:24 P:\STEALTH\CRYSTAL.RPT\Form1m.rpt

Analytical Results

Client:

PW Environmental

Project:

Bauer

Sample Matrix:

Soil

Service Request: L0401901

Date Collected: 09/10/2004

Date Received: 09/10/2004

Gasoline Range Organics (GRO)

Sample Name:

BX-4

Lab Code:

L0401901-003

**Extraction Method:** Analysis Method:

EPA 5035

8015B

Units: mg/Kg

Basis: Wet

Level: Low

Dilution Date Date Extraction Analyte Name Result Q **PQL MDL Factor** Extracted Analyzed Lot Note Gasoline ND U 0.085 LWG0403337 0.045 1 09/16/04 09/16/04

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	80	58-119	09/16/04	Acceptable	

Comments:

Printed: 09/21/2004 10:24:17

Merged

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Page

SuperSet Reference: RR7272 1 of 1

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Analytical Results

Client:

PW Environmental

Project:

Bauer

Sample Matrix:

Soil

Service Request: L0401901 Date Collected: 09/10/2004

**Date Received:** 09/10/2004

Gasoline Range Organics (GRO)

Sample Name:

BX-5

Lab Code:

L0401901-004

**Extraction Method:** 

EPA 5030B

Analysis Method:

8015B

Units: mg/Kg

Basis: Wet

Level: Med

				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline	<b>67</b> D	9.1	4.6	2	09/16/04	09/16/04	LWG0403305	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	0	62-133	09/16/04	Outside Control Limits

Comments:

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Form 1A - Organic

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Page

1 of

SuperSet Reference: RR7271

Analytical Results

Client:

PW Environmental

Project: Sample Matrix: Bauer

Soil

Service Request: L0401901

Date Collected: 09/10/2004

Date Received: 09/10/2004

Gasoline Range Organics (GRO)

Sample Name:

BX-6

Lab Code:

L0401901-005

Extraction Method:

EPA 5030B

Analysis Method:

8015B

Units: mg/Kg

Basis: Wet

Level: Med

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline	120	4.8	2.3	1	09/17/04	09/17/04	LWG0403305	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	0	62-133	09/17/04	Outside Control Limits

Comments:

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Form 1A - Organic

SuperSet Reference: RR7271

Page 1 of 1

Analytical Results

Client:

Project:

Bauer Soil

PW Environmental

Service Request: L0401901

Date Collected: 09/10/2004

**Date Received:** 09/10/2004

Gasoline Range Organics (GRO)

Sample Name:

Sample Matrix:

BX-7

Lab Code:

L0401901-006

**Extraction Method:** Analysis Method:

EPA 5030B

Units: mg/Kg

Basis: Wet

Level: Med

8015B

				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline	130 D	8.5	4.6	2	09/17/04	09/17/04	LWG0403305	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	0	62-133	09/17/04	Outside Control Limits	

Comments:

Printed: 09/21/2004 10:19:27 P:\STEALTH\CRYSTAL.RPT\Form1m.rpt

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1 of 1

SuperSet Reference: RR7271

Analytical Results

Client:

PW Environmental

Project: Sample Matrix: Bauer

Soil

Service Request: L0401901

Date Collected: 09/10/2004 **Date Received:** 09/10/2004

Gasoline Range Organics (GRO)

Sample Name:

BX-8

Lab Code:

L0401901-007

Extraction Method:

EPA 5035

Analysis Method:

8015B

Units: mg/Kg

Basis: Wet

Level: Low

   Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline	ND U	0.11	0.046	1	09/15/04	09/15/04	LWG0403303	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	74	58-119	09/15/04	Acceptable

Comments:

25

Form 1A - Organic Merged

SuperSet Reference: RR7271 Page

1 of 1

Analytical Results

Client:

PW Environmental

Project: Sample Matrix: Bauer

Soil

Service Request: L0401901

Date Collected: NA

Date Received: NA

Gasoline Range Organics (GRO)

Sample Name:

Method Blank

Lab Code:

LWG0403303-3

Extraction Method:

EPA 5035

Analysis Method:

8015B

Units: mg/Kg

Basis: Wet

Level: Low

Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline	ND U	0.10	0.045	1	09/15/04	09/15/04	LWG0403303	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	94	58-119	09/15/04	Acceptable	

Comments:

Printed: 09/21/2004 10:19:28

Form 1A - Organic

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Page

SuperSet Reference:

RR7271

Merged

Analytical Results

Client:

PW Environmental

Project: Sample Matrix: Bauer Soil

Service Request: L0401901

Date Received: NA

Date Collected: NA

Gasoline Range Organics (GRO)

Sample Name: Lab Code:

Method Blank

LWG0403305-3

Units: mg/Kg Basis: Wet

Extraction Method: EPA 5030B

Analysis Method:

8015B

Level: Med

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline	ND U	5.0	2.3	1	09/15/04	09/15/04	LWG0403305	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	97	62-133	09/15/04	Acceptable	<del></del>

Comments:

Printed: 09/21/2004 10:19:29 P:\STEALTH\CRYSTAL.RPT\Form1m.rpt

Form 1A - Organic

Merged

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Page

SuperSet Reference: RR7271 1 of 1

Analytical Results

Client:

PW Environmental

Project: Sample Matrix:

Bauer Soil

Service Request: L0401901

Date Collected: NA Date Received: NA

Gasoline Range Organics (GRO)

Sample Name: Lab Code:

Method Blank LWG0403337-3

**Extraction Method:** 

EPA 5035

Analysis Method:

8015B

Units: mg/Kg

Basis: Wet

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline	ND U	0.10	0.045	1	09/16/04	09/16/04	LWG0403337	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	96	58-119	09/16/04	Acceptable

Comments:

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QA/QC Report

Client:

PW Environmental

Project: Sample Matrix: Bauer

Soil

Service Request: L0401901

**Surrogate Recovery Summary** Gasoline Range Organics (GRO)

Extraction Method:

EPA 5035

Analysis Method:

8015B

Units: PERCENT

Level: Low

Sample Name	Lab Code	<u>Sur1</u>
BX-4	L0401901-003	80
BX-8	L0401901-007	74
Method Blank	LWG0403303-3	94
Method Blank '	LWG0403337-3	96
Lab Control Sample	LWG0403303-1	102
Duplicate Lab Control Sample	LWG0403303-2	99
Lab Control Sample	LWG0403337-1	104
Duplicate Lab Control Sample	LWG0403337-2	102

Surrogate Recovery Control Limits (%)

Sur1 = Bromofluorobenzene

58-119

Results flagged with an asterisk (\*) indicate values outside control criteria. Results flagged with a pound (#) indicate the control criteria is not applicable.

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Form 2A - Organic

Page 1 of 1

Printed: 09/21/2004 10:53:03 P:\STEALTH\CRYSTAL.RPT\Form2.rpt

SuperSet Reference: RR7272

QA/QC Report

Client:

PW Environmental

Project:

Bauer

Sample Matrix:

Soil

Surrogate Recovery Summary Gasoline Range Organics (GRO)

Extraction Method: EPA 5030B

Analysis Method:

8015B

Service Request: L0401901

Units: PERCENT

Level: Med

Sample Name	Lab Code	Sur1
BX-2	L0401901-001	0 D *
BX-3	L0401901-002	0 D *
BX-5	L0401901-004	0 D *
BX-6	L0401901-005	0 *
BX-7	L0401901-006	0 D *
Method Blank	LWG0403305-3	97
Lab Control Sample	LWG0403305-1	107
Duplicate Lab Control Sample	LWG0403305-2	107

Surrogate Recovery Control Limits (%)

Sur1 = Bromofluorobenzene

62-133

Results flagged with an asterisk (\*) indicate values outside control criteria. Results flagged with a pound (#) indicate the control criteria is not applicable.

30

Form 2A - Organic

SuperSet Reference: RR7271 1 of

Printed: 09/21/2004 10:19:36 P:\STEALTH\CRYSTAL.RPT\Form2.rpt

QA/QC Report

Client:

PW Environmental

Project: Sample Matrix: Bauer

Soil

Service Request: L0401901 Date Extracted: 09/15/2004

**Date Analyzed:** 09/15/2004

Lab Control Spike/Duplicate Lab Control Spike Summary Gasoline Range Organics (GRO)

Extraction Method: EPA 5035

Analysis Method:

8015B

Units: mg/Kg

Basis: Wet

Level: Low

Extraction Lot: LWG0403303

Lab Control Sample

LWG0403303-1

Duplicate Lab Control Sample

LWG0403303-2

Analyte Name	Lab	Lab Control Spike			Duplicate Lab Control Spike			%Rec	RPD	
	Result	Expected	%Rec	Result	Expected	%Rec	Limits	RPD	Limit	
Gasoline	0.874	1.00	87	0.840	1.00	84	76-117	4	20	

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:

PW Environmental

Project: Sample Matrix: Bauer

Soil

Service Request: L0401901

Date Extracted: 09/15/2004 Date Analyzed: 09/15/2004 -

09/16/2004

Lab Control Spike/Duplicate Lab Control Spike Summary Gasoline Range Organics (GRO)

**Extraction Method:** 

**EPA 5030B** 

Analysis Method:

8015B

Units: mg/Kg

Basis: Wet

Level: Med

Extraction Lot: LWG0403305

Lab Control Sample

Duplicate Lab Control Sample

LWG0403305-2

LWG0403305-1 **Duplicate Lab Control Spike** Lab Control Spike **RPD** %Rec **RPD** Limits Limit Analyte Name Result **Expected** %Rec Result **Expected** %Rec 45.5 89 46.4 91 74-111 2 20 Gasoline 51.0 51.0

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:

PW Environmental

Project:

Bauer

Sample Matrix:

Soil

Service Request: L0401901

Date Extracted: 09/16/2004

Date Analyzed: 09/16/2004

Lab Control Spike/Duplicate Lab Control Spike Summary Gasoline Range Organics (GRO)

%Rec

87

Extraction Method: EPA 5035

Analysis Method:

Analyte Name

Gasoline

8015B

Units: mg/Kg Basis: Wet

Level: Low Extraction Lot: LWG0403337

Lab Control Sample

LWG0403337-1 Lab Control Spike

Expected

1.00

Result

0.873

Duplicate Lab Control Sample

LWG0403337-2

1.00

0.850

**Duplicate Lab Control Spike** %Rec Limits Result Expected %Rec

85

**RPD RPD** Limit 76-117 3 20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

RR7272

SuperSet Reference:

## Analytical Report

Client:

PW Environmental

Project:

Bauer

Service Request: L0401901

Sample Matrix:

Soil

Date Collected: 9/10/04 Date Received: 9/10/04

Lead, Total

Prep Method:

**EPA 3050B** 

Units: mg/Kg (ppm)

Analysis Method:

6020

Basis: Wet

Test Notes:

Sample Name	Lab Code	PQL	MDL	Dilution Factor	Date Digested	Date Analyzed	Result	Result Notes
BX-2	L0401901-001	0.4	0.04	1	9/14/04	9/14/04	12	
BX-3	L0401901-002	0.4	0.04	1	9/14/04	9/14/04	16	
BX-4	L0401901-003	0.4	0.04	1	9/14/04	9/14/04	9	
BX-5	L0401901-004	0.4	0.04	1	9/14/04	9/14/04	13	
BX-6	L0401901-005	0.4	0.04	1	9/14/04	9/14/04	12	
BX-7	L0401901-006	0.4	0.04,	1	9/14/04	9/14/04	13	
BX-8	L0401901-007	0.4	0.04	I	9/14/04	9/14/04	6.3	
Method Blank	L040914-MB2	0.4	0.04	1	9/14/04	9/14/04	ND	

Approved By: \_

1A/020597p

Date: 9/17/04

QA/QC Report

Client:

PW Environmental

Project: LCS Matrix: Bauer Soil

Service Request: L0401901

Date Collected: NA

Date Received: NA
Date Digested: 9/14/04

Date Analyzed: 9/14/04

Laboratory Control Sample Summary

Lead, Total

Sample Name: Lab Code: Lab Control Sample

L040914-LCS

Units: mg/Kg (ppm)

Basis: NA

Test Notes:

**CAS** Percent Recovery **Analysis** True Percent Acceptance Result Prep Analyte Method Method Value Result Recovery Limits **Notes** Lead, Total **EPA 3050B** 6020 100 102 102 70-130

\_\_\_ Date: \_\_\_\_**9/17/0**/

LCS/020597p

35

QA/QC Report

Client:

PW Environmental

Project:

Sample Matrix:

Bauer

Soil

Service Request: L0401901

Date Collected: NA

Date Received: NA

Date Digested: 9/14/04

Date Analyzed: 9/14/04

Matrix Spike/Duplicate Matrix Spike Summary

Lead, Total

Sample Name:

Batch QC

L0401886-001MS

L0401886-001DMS

Units: mg/Kg (ppm)

Basis: Wet

Lab Code: Test Notes:

Percent Recovery

Analyte	Prep Method	Analysis Method	PQL	Spike MS		Sample Result	Spike MS	Result DMS	MS	DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Lead, Total	EPA 3050B	6020	0.4	100	100	8.45	110	109	102	101	70-130	<1	

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# 

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# SAMPLE RECEIPT FORM

Service Request No: L040 901 Client: PW ENV
Sample(s) delivered by: Client CAS Emp _/ After Hours DHL
Golden State Overnight Fed X UPS Other Courier
Chain of Custody filled out accurately? Yes _/ No(See Comments)
Appropriate sample volume and containers? Yes/ No(See Comments)
Sufficient labeling on container(s)?  Yes/ No (See Comments)
Container(s) supplied by CAS?  Yes No/(See Comments)
Custody seal(s) intact? N/A / Yes No(See Comments)
Trip Blank(s) received Yes No/_
If Trip Blank was supplied by CAS, record serial #TB
Temperature of sample(s)/cooler °C Temp Blank? Y o(N)(Circle One)
Voa's Marked Preserved? Yes No Filled Properly? Yes No (See Commen
Preserved Bottles Requiring pH check(s)? Yes Appropriate Preservation? Yes No
RUSH Turn around time? Yes Notified
Short Hold-Time Analysis (check all that apply)
ASAP         Res Cl D.O Flash Diss S2 Ferrous Fe           24HR         pH Odor Cr+6           48HR         BOD Color MBAS Nitrate           Nitrite O-PO4 Sett Sol Turbidity           72HR         Vapors
Notified Date & Time
Container(s) received and their preservative(s):
-1 -> -7 = 6-ENCORE 1-BRASS SOIL SLEEVE 1-402 Jar
Comments RUSH ENCORES TRANSFERRED TO FREEZER 9/10/14 1350
Initials, Date, Time / 2 9/10/04 13(11) r:\sr forms\cooler.doc Rev. 2/25/02



October 27, 2004

Robert Orlando PW Environmental 230 Dove Court Santa Paula, CA 93060

RE: Bauer Manufacturing

Dear Robert:

Enclosed are the results of the samples submitted to our laboratory on October 13, 2004. For your reference, these analyses have been assigned our service request number L0402100.

All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed. Columbia Analytical Services is not responsible for use of less than the complete report. Your report contains \_\_32 pages.

Columbia Analytical Services is certified for environmental analyses by the California Department of Health Services (certificate number: 1296A); NELAP (certificate number: 02115CA); Los Angeles County Laboratory ID (No. 10151); and Arizona Department of Health Services (License number: AZ0136 and AZ0544).

If you have any questions, please call me at (818) 587-5550, extension 310.

Respectfully submitted,

Columbia Analytical Services, Inc.

Stuart Sigman Project Chemist

SS/sa

# Columbia Analytical Services, Inc.

### Acronyms

8015M California DHS LUFT Method

ASTM American Society for Testing and Materials

BOD Biochemical Oxygen Demand

BTEX Benzene/Toluene/Ethylbenzene/Xylenes

CAM California Assessment Metals

CAS Number Chemical Abstract Service Registry Number

CFC Chlorofluorocarbon
COD Chemical Oxygen Demand
CRDL Contract Required Detection Limit
D Detected; result must be greater than zero.

DL Detected; result must be greater than the detection limit.

DLCS Duplicate Laboratory Control Sample

DMS Duplicate Matrix Spike
DOH or DHS Department of Health Services

ELAP Environmental Laboratory Accreditation Program

EPA U.S. Environmental Protection Agency

GC Gas Chromatography

GC/MS Gas Chromatography/Mass Spectrometry

IC Ion Chromatography

ICB Initial Calibration Blank sample

ICP Inductively Coupled Plasma atomic emission spectrometry

ICV Initial Calibration Verification sample

LUFT Laboratory Control Sample
LUFT Leaking Underground Fuel Tank

M Modified

MBAS Methylene Blue Active Substances

MDL Method Detection Limit
MRL Method Reporting Limit

MS Matrix Spike

MTBE Methyl-tert-Butyl Ether

NA Not Applicable
NC Not Calculated

ND None Detected at or above the Method Reporting/Detection Limit (MRL/MDL)

NTU Nephelometric Turbidity Units

ppb Parts Per Billion ppm Parts Per Million

PQL Practical Quantitation Limit
QA/QC Quality Assurance/Quality Control
RCRA Resource Conservation and Recovery Act

RPD Relative Percent Difference SIM Selected Ion Monitoring

SM Standard Methods for the Examination of Water and Wastewater 18th Ed., 1992.

STLC Solubility Threshold Limit Concentration

SW Test Methods for Evaluating Solid Waste, Physical/Chemical MethodsSW-846,

Third Edition, 1986 and as amended by Updates I, II, IIA, and IIB.

TCLP Toxicity Characteristics Leaching Procedure

TDS Total Dissolved Solids
TPH Total Petroleum Hydrocarbons

TRPH Total Recoverable Petroleum Hydrocarbons

TSS Total Suspended Solids

TTLC Total Threshold Limit Concentration

VOA Volatile Organic Analyte(s)

### Qualifiers

U Undetected at or above MDL/MRL (PQL).

J Estimated concentration. Analyte detected above MDL but below MRL (PQL).

B Hit above MRL (PQL) also found in Method Blank.
E Analyte concentration above high point of ICAL.

D Result from dilution.X See case narrative.

Client:

PW Environmental

Project:

Bauer Manufacturing

Sample Matrix:

Soil

Service Request No.: L0402100

Date Received:

10/13/04

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory Control Sample (LCS).

# Sample Receipt

The samples were received for analysis at Columbia Analytical Services on 10/13/04. No discrepancies were noted upon initial sample inspection. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored at 4°C or frozen at -20°C upon receipt at the laboratory.

### Volatile Organic Compounds by EPA Method 8260B

The control criteria were exceeded for the following surrogates in sample BSC 1-1 due to matrix interferences: Toluene-d8 and 4-Bromofluorobenzene. Due to the presence of non-target background components that prevented adequate resolution of the surrogate, accurate quantitation was not possible. No further corrective action was appropriate.

In sample BSC 1-1, Ethylbenzene was found at concentration above the highest instrument calibration. The sample was reanalyzed as medium level and reported for Ethylbenzene only.

The upper control criterion was exceeded for the following analytes in Laboratory Control Samples (LCS and DLCS) of Extraction Lots: LWG0403763 and LWG0403795: Methyl tert-Butyl Ether. Tert-Butyl Ethyl Ether and tert-Amyl Methyl Ether was also exceeded the control criteria in LWG0403763-1 and LWG0403763-2. The analytes in question were not detected in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

### Gasoline Range Organics by EPA Method 8015M

Sample BSC 1-1 required dilution due to the presence of elevated levels of target analyte. The reporting limits are adjusted to reflect the dilution.

The control criterion for the Bromofluorobenzene surrogate in sample BSC 1-1 is not applicable. The analysis of the sample required a dilution, which resulted in a surrogate concentration below the reporting limit. No further corrective action was appropriate.

### **Total Metals**

Batch QC was run along with these samples. These results are provided for information purposes only. The Method Blank and Laboratory Control Sample were within control criteria. No anomalies were encountered during this analysis.

Approved by	55,	Date	10/	7/0	14
	3				

Client: Project:

PW Environmental Bauer Manufacturing Service Request:

L0402100

Cover Page - Organic Analysis Data Package **Volatile Organic Compounds** 

		Date	Date
Sample Name	Lab Code	Collected	Received
BSC 1-1	L0402100-001	10/12/2004	10/13/2004
BSC 1-2	L0402100-002	10/12/2004	10/13/2004
BSC 1-3	L0402100-003	10/12/2004	10/13/2004
BSC 1-4	1.0402100-004	10/12/2004	10/14/2004

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

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Name: Swart Sigman

Title: Project Chmist

Cover Page - Organic

Page 1 of

**Analytical Results** 

Client:

PW Environmental Bauer Manufacturing Service Request: L0402100 Date Collected: 10/12/2004

Project: Sample Matrix:

Soil

Date Received: 10/13/2004

# **Volatile Organic Compounds**

Sample Name:

BSC 1-1

Units: ug/Kg Basis: Wet

Lab Code:

L0402100-001

Extraction Method:

EPA 5035

Level: Low

Analysis Method: 8260B

Analyte Name	Result	Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	5.4	1.2	1	10/18/04	10/18/04	LWG0403763	
Toluene	ND	U	5.4	1.3	1	10/18/04	10/18/04	LWG0403763	
Total Xylenes	4.3	J	16	4.2	1	10/18/04	10/18/04	LWG0403763	
Methyl tert-Butyl Ether	ND	U	11	2.7	1	10/18/04	10/18/04	LWG0403763	
tert-Butyl Alcohol	ND	U	54	25	1	10/18/04	10/18/04	LWG0403763	
Diisopropyl Ether	ND	U	11	2.3	1	10/18/04	10/18/04	LWG0403763	
tert-Butyl Ethyl Ether	ND	U	11	2.3	1	10/18/04	10/18/04	LWG0403763	
tert-Amyl Methyl Ether	ND	U	11	2.5	1	10/18/04	10/18/04	LWG0403763	
1,2-Dibromoethane (EDB)	ND	U	5.4	1.2	1	10/18/04	10/18/04	LWG0403763	
1,2-Dichloroethane (EDC)	ND	U	5.4	1.2	1	10/18/04	10/18/04	LWG0403763	

		1			
Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Dibromofluoromethane	107	62-136	10/18/04	Acceptable	
Toluene-d8	204	67-131	10/18/04	Outside Control Limits	
4-Bromofluorobenzene	712	64-130	10/18/04	Outside Control Limits	

Comments:

Merged - Mixed Analyses

Page

Analytical Results

Client:

PW Environmental

Project:

Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100 Date Collected: 10/12/2004

Date Received: 10/13/2004

**Volatile Organic Compounds** 

Sample Name:

BSC 1-1

Lab Code:

L0402100-001

Units: ug/Kg

Basis: Wet

**Extraction Method:** 

EPA 5035

Analysis Method:

8260B

Level: Med

Analyte Name

Result Q

**PQL** 

Dilution **Factor MDL** 

Date Extracted

Date Analyzed Extraction

Note

Ethylbenzene

1000

180

16

10/19/04

10/19/04

Lot LWG0403795

Surrogate Name

%Rec

Limits

Control

Note

Comments:

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SuperSet Reference:

RR7581

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Merged - Mixed Analyses

Analytical Results

Client:

PW Environmental

Project: Sample Matrix: Bauer Manufacturing Soil

Service Request: L0402100

Date Collected: 10/12/2004

**Date Received:** 10/13/2004

# Volatile Organic Compounds

Sample Name:

BSC 1-2

Lab Code:

L0402100-002

**Extraction Method:** 

EPA 5035

Units: ug/Kg Basis: Wet

Level: Low

LWG0403763

LWG0403763

Analysis Method:

tert-Amyl Methyl Ether

8260B

Dilution Date Date Extraction Analyte Name **PQL MDL Factor** Extracted Analyzed Result Q Lot Note Benzene LWG0403763 ND U 4.4 1.1 1 10/18/04 10/18/04 Toluene ND U 4.4 1.2 1 10/18/04 10/18/04 LWG0403763 Ethylbenzene ND U 4.4 1.2 1 10/18/04 10/18/04 LWG0403763 1 Total Xylenes ND U 13 3.9 10/18/04 10/18/04 LWG0403763 Methyl tert-Butyl Ether ND U 8.7 LWG0403763 2.5 1 10/18/04 10/18/04 tert-Butyl Alcohol ND U 44 23 1 LWG0403763 10/18/04 10/18/04 Diisopropyl Ether ND U 8.7 2,1 1 10/18/04 10/18/04 LWG0403763 tert-Butyl Ethyl Ether ND U 8.7 2.1 1 10/18/04 10/18/04 LWG0403763

2.3

1.1

1

1

10/18/04

10/18/04

10/18/04

1,2-Dibromoethane (EDB) 10/18/04 1,2-Dichloroethane (EDC) ND U 4.4 1.1 1 10/18/04 10/18/04 LWG0403763

8.7

4.4

ND U

ND U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Dibromofluoromethane	96	62-136	10/18/04	Acceptable	
Toluene-d8	102	67-131	10/18/04	Acceptable	
4-Bromofluorobenzene	97	64-130	10/18/04	Acceptable	•

Comments:

Analytical Results

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100 Date Collected: 10/12/2004

**Date Received:** 10/13/2004

**Volatile Organic Compounds** 

Sample Name:

BSC 1-3

Lab Code:

L0402100-003

**Extraction Method:** Analysis Method:

EPA 5035

Units: ug/Kg Basis: Wet

Level: Low

8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	4.1	1.1	1	10/18/04	10/18/04	LWG0403763	
Toluene	ND U	4.1	1.2	1	10/18/04	10/18/04	LWG0403763	
Ethylbenzene	ND U	4.1	1.2	1	10/18/04	10/18/04	LWG0403763	
Total Xylenes	ND U	12	3.9	1	10/18/04	10/18/04	LWG0403763	
Methyl tert-Butyl Ether	ND U	8.1	2.5	1	10/18/04	10/18/04	LWG0403763	
tert-Butyl Alcohol	ND U	41	23	1	10/18/04	10/18/04	LWG0403763	
Diisopropyl Ether	ND U	8.1	2,1	1	10/18/04	10/18/04	LWG0403763	
tert-Butyl Ethyl Ether	ND U	8.1	2.1	1	10/18/04	10/18/04	LWG0403763	
tert-Amyl Methyl Ether	ND U	8.1	2.3	1	10/18/04	10/18/04	LWG0403763	
1,2-Dibromoethane (EDB)	ND U	4.1	1.1	1	10/18/04	10/18/04	LWG0403763	
1,2-Dichloroethane (EDC)	ND U	4.1	1.1	1	10/18/04	10/18/04	LWG0403763	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	100	62-136	10/18/04	Acceptable
Toluene-d8	101	67-131	10/18/04	Acceptable
4-Bromofluorobenzene	99	64-130	10/18/04	Acceptable

Comments:

**Analytical Results** 

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100

Date Collected: 10/12/2004

**Date Received:** 10/14/2004

# Volatile Organic Compounds

Sample Name:

BSC 1-4

Lab Code:

L0402100-004

Extraction Method: EPA 5035

Analysis Method:

8260B

Units: ug/Kg Basis: Wet

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	4.1	1.1	1	10/18/04	10/18/04	LWG0403763	
Toluene	ND U	4.1	1.2	1	10/18/04	10/18/04	LWG0403763	
Ethylbenzene	ND U	4.1	1.2	1	10/18/04	10/18/04	LWG0403763	
Total Xylenes	ND U	12	3.9	1	10/18/04	10/18/04	LWG0403763	
Methyl tert-Butyl Ether	ND U	8.2	2.5	1	10/18/04	10/18/04	LWG0403763	
tert-Butyl Alcohol	ND U	41	23	1	10/18/04	10/18/04	LWG0403763	
Diisopropyl Ether	ND U	8.2	2,1	1	10/18/04	10/18/04	LWG0403763	
tert-Butyl Ethyl Ether	ND U	8.2	2.1	1	10/18/04	10/18/04	LWG0403763	
tert-Amyl Methyl Ether	ND U	8.2	2.3	1	10/18/04	10/18/04	LWG0403763	
1,2-Dibromoethane (EDB)	ND U	4.1	1.1	1	10/18/04	10/18/04	LWG0403763	
1,2-Dichloroethane (EDC)	ND U	4.1	1.1	1	10/18/04	10/18/04	LWG0403763	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Dibromofluoromethane	99	62-136	10/18/04	Acceptable	
Toluene-d8	98	67-131	10/18/04	Acceptable	
4-Bromofluorobenzene	97	64-130	10/18/04	Acceptable	

Comments:

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**Analytical Results** 

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100

Date Collected: NA
Date Received: NA

# **Volatile Organic Compounds**

Sample Name: Lab Code: Method Blank LWG0403763-3

Extraction Method:

EPA 5035

Units: ug/Kg
Basis: Wet

Level: Low

Analysis Method:

8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	5.0	1.1	1	10/18/04	10/18/04	LWG0403763	
Toluene	ND U	5.0	1.2	1	10/18/04	10/18/04	LWG0403763	
Ethylbenzene	ND U	5.0	1.2	1	10/18/04	10/18/04	LWG0403763	
Total Xylenes	ND U	15	3.9	1	10/18/04	10/18/04	LWG0403763	
Methyl tert-Butyl Ether	ND U	10	2.5	1	10/18/04	10/18/04	LWG0403763	
tert-Butyl Alcohol	ND U	50	23	1	10/18/04	10/18/04	LWG0403763	
Diisopropyl Ether	ND U	10	2,1	<u> </u>	10/18/04	10/18/04	LWG0403763	-
tert-Butyl Ethyl Ether	ND U	10	2.1	1	10/18/04	10/18/04	LWG0403763	
tert-Amyl Methyl Ether	ND U	10	2.3	1	10/18/04	10/18/04	LWG0403763	
1,2-Dibromoethane (EDB)	ND U	5.0	1.1	1	10/18/04	10/18/04	LWG0403763	
1,2-Dichloroethane (EDC)	ND U	5.0	1.1	1	10/18/04	10/18/04	LWG0403763	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	62-136	10/18/04	Acceptable
Toluene-d8	103	67-131	10/18/04	Acceptable
4-Bromofluorobenzene	98	64-130	10/18/04	Acceptable

Comments:

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**Analytical Results** 

Client:

PW Environmental Bauer Manufacturing Service Request: L0402100

Project: Sample Matrix:

Date Collected: NA Date Received: NA

**Volatile Organic Compounds** 

Sample Name: Lab Code:

Method Blank LWG0403795-3 Units: ug/Kg Basis: Wet

Extraction Method: EPA 5035

Level: Med

Analysis Method:

8260B

Analyte Name Re	sult	Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	200	17	1	10/19/04	10/19/04	LWG0403795	
Toluene	ND	U	200	22	1	10/19/04	10/19/04	LWG0403795	
Ethylbenzene	ND	U	200	16	1	10/19/04	10/19/04	LWG0403795	
Total Xylenes	ND	U	600	54	1	10/19/04	10/19/04	LWG0403795	
Methyl tert-Butyl Ether	ND	U	500	32	1	10/19/04	10/19/04	LWG0403795	
tert-Butyl Alcohol	ND	U	2500	1100	1	10/19/04	10/19/04	LWG0403795	
Diisopropyl Ether	ND	U	500	27	1	10/19/04	10/19/04	LWG0403795	
tert-Butyl Ethyl Ether	ND	U	500	29	1	10/19/04	10/19/04	LWG0403795	
tert-Amyl Methyl Ether	ND	U	500	27	1	10/19/04	10/19/04	LWG0403795	
1,2-Dibromoethane (EDB)	ND	U	200	21	1	10/19/04	10/19/04	LWG0403795	
1,2-Dichloroethane (EDC)	ND	U	200	21	1	10/19/04	10/19/04	LWG0403795	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	102	65-131	10/19/04	Acceptable
Toluene-d8	100	62-131	10/19/04	Acceptable
4-Bromofluorobenzene	93	54-129	10/19/04	Acceptable

Comments:

QA/QC Report

Client:

PW Environmental

Project:

Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100

Surrogate Recovery Summary Volatile Organic Compounds

Extraction Method:

EPA 5035

Analysis Method:

8260B

Units: PERCENT

Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	
BSC 1-1	L0402100-001	107	204 *	712 *	
BSC 1-2	L0402100-002	96	102	97	
BSC 1-3	L0402100-003	100	101	99	
BSC 1-4	L0402100-004	99	98	97	
Method Blank	LWG0403763-3	104	103	98	
Lab Control Sample	LWG0403763-1	106	103	101	
Duplicate Lab Control Sample	LWG0403763-2	104	101	98	

Surrogate Recovery Control Limits (%)

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Sur1	=	Dibromofluoromethane	62-136
Sur2	=	Toluene-d8	67-131
Sur3	=	4-Bromofluorobenzene	64-130

Results flagged with an asterisk (\*) Indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:

PW Environmental

Project:

Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100

Surrogate Recovery Summary Volatile Organic Compounds

Extraction Method:

EPA 5035

Analysis Method:

8260B

Units: PERCENT

Level: Med

Sample Name	Lab Code	Sur1	Sur2	Sur3
Method Blank	LWG0403795-3	102	100	93
Lab Control Sample	LWG0403795-1	114	104	96
Duplicate Lab Control Sample	LWG0403795-2	116	108	95

Surrogate Recovery Control Limits (%)

Sur1 = Dibromofluoromethane65-131Sur2 = Toluene-d862-131Sur3 = 4-Bromofluorobenzene54-129

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

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RR7581

QA/QC Report

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100 Date Extracted: 10/18/2004

**Date Analyzed:** 10/18/2004

# Lab Control Spike/Duplicate Lab Control Spike Summary **Volatile Organic Compounds**

Extraction Method:

EPA 5035

Units: ug/Kg Basis: Wet

Level: Low

Extraction Lot: LWG0403763

Analysis Method:

8260B

Lab Control Sample T WG0403763-1

**Duplicate Lab Control Sample** I WG0403763-2

	LWG0403763-1  Lab Control Spike			Duplicate Lab Control Spike			%Rec		RPD
Analyte Name	Result	Expected	%Rec	Result	Expected	%Rec	Limits	RPD	Limit
Benzene	21.1	20.0	105	18.9	20.0	95	64-125	11	30
Toluene	21.4	20.0	107	19.0	20.0	95	69-119	12	30
Ethylbenzene	22.2	20.0	111	19.5	20.0	98	68-120	13	30
Total Xylenes	66.6	60.0	111	57.7	60.0	96	65-121	14	30
Methyl tert-Butyl Ether	60.7	40.0	152 *	, 55.7	40.0	139 *	64-131	9	30
tert-Butyl Alcohol	456	400	114	397	400	99	60-128	14	30
Diisopropyl Ether	48.9	40.0	122	43.0	40.0	107	70-124	13	30
tert-Butyl Ethyl Ether	55.7	40.0	139 *	51.5	40.0	129 *	70-126	8	30
tert-Amyl Methyl Ether	52.0	40.0	130 *	47.9	40.0	120	74-122	8	30
1,2-Dibromoethane (EDB)	20.6	20.0	103	19.0	20.0	95	74-118	8	30
1,2-Dichloroethane (EDC)	19.9	, 20.0	99	18.1	20.0	91	65-128	9	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

RR7581

QA/QC Report

Client:

PW Environmental Bauer Manufacturing

Project: Sample Matrix:

Soil

Date Extracted: 10/19/2004

Service Request: L0402100

**Date Analyzed:** 10/19/2004

Lab Control Spike/Duplicate Lab Control Spike Summary **Volatile Organic Compounds** 

Extraction Method: EPA 5035

Analysis Method: 8260B

Units: ug/Kg Basis: Wet

Level: Med

Extraction Lot: LWG0403795

Lab Control Sample

LWG0403795-1

**Duplicate Lab Control Sample** LWG0403795-2

	Lab Control Spike			Duplicate Lab Control Spike			%Rec		RPD
Analyte Name	Result	Expected	%Rec	Result	Expected	%Rec	Limits	RPD	Limit
Benzene	904	1000	90	992	1000	99	74-128	9	30
Toluene	953	1000	95	1030	1000	103	77-130	8	30
Ethylbenzene	925	1000	93	1000	1000	100	80-120	8	30
Total Xylenes	2820	3000	94	3020	3000	101	80-122	7	30
Methyl tert-Butyl Ether	2770	2000	138 *	2840	2000	142 *	74-125	3	30
1,2-Dibromoethane (EDB)	951	1000	95	975	1000	98	68-130	2	30
1,2-Dichloroethane (EDC)	928	1000	93	997	1000	100	71-133	7	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Project: PW Environmental Bauer Manufacturing

Service Request:

L0402100

Cover Page - Organic Analysis Data Package Gasoline Range Organics (GRO)

Samula Nama	Lab Code	Date Collected	Date Received	
Sample Name	Lab Code	Concettu	Neccivea	
BSC 1-1	L0402100-001	10/12/2004	10/13/2004	
BSC 1-2	L0402100-002	10/12/2004	10/13/2004	
BSC 1-3	L0402100-003	10/12/2004	10/13/2004	
BSC 1-4	L0402100-004	10/12/2004	10/14/2004	

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Date: 10/27/04

Name: 5 Hart Sigman

Title: Project Chemist

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Cover Page - Organic

Page

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**Analytical Results** 

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100

**Date Collected:** 10/12/2004 **Date Received:** 10/13/2004

Gasoline Range Organics (GRO)

Sample Name:

BSC 1-1

Lab Code:

L0402100-001

Extraction Method:

EPA 5035

Units: mg/Kg

Basis: Wet

Level: Med

Analysis Method:

8015B

**Dilution** Date Date Extraction **Analyte Name** Result Q **PQL MDL Factor** Extracted Analyzed Lot Note Gasoline 93 20 2200 D 10/19/04 LWG0403782 46 10/19/04

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	0	62-133	10/19/04	Outside Control Limits

Comments:

Analytical Results

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100

Date Collected: 10/12/2004

Date Received: 10/13/2004

Gasoline Range Organics (GRO)

Sample Name:

BSC 1-2

Lab Code:

L0402100-002

**Extraction Method:** 

EPA 5035

Analysis Method:

8015B

Units: mg/Kg

Basis: Wet

Level: Low

				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline	0.28	0.084	0.045	1	10/22/04	10/22/04	LWG0403820	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	87	58-119	10/22/04	Acceptable	

Comments:

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Merged

18 Form 1A - Organic

Page 1 of 1

SuperSet Reference: RR7633

Analytical Results

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100

Date Collected: 10/12/2004

**Date Received:** 10/13/2004

Gasoline Range Organics (GRO)

Sample Name:

BSC 1-3

Lab Code:

L0402100-003

**Extraction Method:** Analysis Method:

EPA 5035

8015B

Units: mg/Kg

Basis: Wet

Level: Low

**Analyte Name** 

**Dilution Factor MDL** 

Date Extracted

Date Analyzed Extraction Lot Note

Gasoline

Result Q ND U

**PQL** 0.080

0.045

10/19/04

10/19/04 LWG0403774

Surrogate Name Bromofluorobenzene %Rec

82

**Control** Limits

58-119

Analyzed 10/19/04

Date

Note

Acceptable

Comments:

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Form 1A - Organic

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SuperSet Reference:

RR7633

Page 1 of 1

Merged

Analytical Results

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100

Date Collected: 10/12/2004

**Date Received:** 10/14/2004

Gasoline Range Organics (GRO)

Sample Name:

BSC 1-4

Lab Code:

L0402100-004

**Extraction Method:** 

EPA 5035

Units: mg/Kg

Basis: Wet

Analysis Method:

Level: Low

Analyte	Name

8015B

**PQL** 

Dilution **MDL Factor** 0.045

Date Extracted

Date Analyzed Extraction Lot Note

Gasoline

Result Q ND U

0.087

10/19/04 10/19/04 LWG0403774

Surrogate Name

Bromofluorobenzene

%Rec

88

Control Limits 58-119

Date Analyzed 10/19/04

Note

Acceptable

Comments:

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Merged

Form 1A - Organic

20

SuperSet Reference:

RR7633

Page 1 of

Analytical Results

Client: Project:

PW Environmental Bauer Manufacturing

Sample Matrix: Soil Service Request: L0402100

Date Collected: NA Date Received: NA

Gasoline Range Organics (GRO)

Sample Name: Lab Code:

Method Blank

**Extraction Method:** Analysis Method:

LWG0403774-3

EPA 5035 8015B

Units: mg/Kg Basis: Wet

Level: Low

**Dilution** Date Date Extraction **Factor** Analyte Name Result Q **PQL MDL** Extracted Analyzed Lot Note Gasoline ND U 0.10 0.045 1 10/18/04 10/18/04 LWG0403774

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SuperSet Reference: RR7633 Page 1 of 1

Analytical Results

Client:

PW Environmental

Project: Sample Matrix: Bauer Manufacturing

Service Request: L0402100

Date Collected: NA

Soil

Date Received: NA

Gasoline Range Organics (GRO)

Sample Name:

Method Blank

Lab Code:

LWG0403782-3

**Extraction Method:** Analysis Method:

EPA 5035

Units: mg/Kg

Basis: Wet

Level: Med

8015B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline	ND U	5.0	2.3	1	10/19/04	10/19/04	LWG0403782	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	96	62-133	10/19/04	Acceptable	

Comments:

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**Analytical Results** 

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100

Date Collected: NA

Date Received: NA

Gasoline Range Organics (GRO)

Sample Name: Lab Code:

Method Blank LWG0403820-3

Extraction Method:

EPA 5035

Units: mg/Kg

Basis: Wet

Level: Low

Analysis Method:

8015B

Extraction

Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline	ND U	0.10	0.045	1	10/21/04	10/21/04	LWG0403820	

Dilution

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	93	58-119	10/21/04	Acceptable

Comments:

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Merged

Form 1A - Organic

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Page 1 of 1

QA/QC Report

Client:

PW Environmental

Project:

Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100

Surrogate Recovery Summary Gasoline Range Organics (GRO)

Extraction Method:
Analysis Method:

EPA 5035

8015B

Units: PERCENT

Level: Low

Sample Name	Lab Code	Sur1
BSC 1-2	L0402100-002	87
BSC 1-3	L0402100-003	82
BSC 1-4	L0402100-004	88
Method Blank	LWG0403774-3	94
Method Blank	LWG0403820-3	93
Lab Control Sample	LWG0403774-1	99
Duplicate Lab Control Sample	LWG0403774-2	97
Lab Control Sample	LWG0403820-1	97
Duplicate Lab Control Sample	LWG0403820-2	98

Surrogate Recovery Control Limits (%)

Surl = Bromofluorobenzene

58-119

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:

PW Environmental

Project:

Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100

Surrogate Recovery Summary Gasoline Range Organics (GRO)

Extraction Method:
Analysis Method:

EPA 5035

8015B

Units: PERCENT

Level: Med

Sample Name	Lab Code	Sur1
BSC 1-1	L0402100-001	0 D #
Method Blank	LWG0403782-3	96
Lab Control Sample	LWG0403782-1	106
Duplicate Lab Control Sample	LWG0403782-2	107

Surrogate Recovery Control Limits (%)

Sur1 = Bromofluorobenzene

62-133

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

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Form 2A - Organic

Page

1 of 1

SuperSet Reference: RR7633

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QA/QC Report

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100

Date Extracted: 10/18/2004

**Date Analyzed:** 10/18/2004

Lab Control Spike/Duplicate Lab Control Spike Summary Gasoline Range Organics (GRO)

Extraction Method: EPA 5035

Units: mg/Kg

Basis: Wet Level: Low

Extraction Lot: LWG0403774

Analysis Method:

8015B

**Duplicate Lab Control Sample** 

LWG0403774-2

Lab Control Sample

		/G0403774-1 Control Spik			/G0403774-2 Lab Control		%Rec		RPD	
Analyte Name	Result	Expected	%Rec	Result	Expected	%Rec	Limits	RPD	Limit	
Gasoline	0.880	1.00	88	0.857	1.00	86	76-117	3	20	

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100

Date Extracted: 10/19/2004

**Date Analyzed:** 10/19/2004

Lab Control Spike/Duplicate Lab Control Spike Summary Gasoline Range Organics (GRO)

Extraction Method:

EPA 5035

Analysis Method:

8015B

Units: mg/Kg

Basis: Wet

Extraction Lot: LWG0403782

Level: Med

Lab Control Sample

LWG0403782-1

Duplicate Lab Control Sample

LWG0403782-2

Lab Control Spike **Duplicate Lab Control Spike** %Rec **RPD** Limits **RPD** Analyte Name Limit Result %Rec Expected Result Expected %Rec Gasoline 46.9 47.3 51.0 92 51.0 93 74-111 1 20

Results flagged with an asterisk (\*) indicate values outside control criteria.

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

SuperSet Reference:

QA/QC Report

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100

**Date Extracted:** 10/21/2004

**Date Analyzed:** 10/21/2004

Lab Control Spike/Duplicate Lab Control Spike Summary Gasoline Range Organics (GRO)

**Extraction Method:** Analysis Method:

EPA 5035

8015B

Units: mg/Kg

Basis: Wet Level: Low

Extraction Lot: LWG0403820

Lab Control Sample

LWG0403820-1 Lab Control Spike Duplicate Lab Control Sample

LWG0403820-2

**Duplicate Lab Control Spike** 

%Rec Limits **RPD** 

**RPD** Limit

**Analyte Name** Gasoline

%Rec Result Result Expected 0.914 1.00 91

0.926

1.00

Expected

93 76-117

%Rec

1

20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Printed: 10/26/2004 07:28:13

# **Analytical Report**

Client:

PW Environmental

Project:

Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402100

Date Collected: 10/12/04

Date Received: 10/13/04

Lead, Total

Prep Method:

**EPA 3050B** 

Analysis Method:

6020

Test Notes:

Units: mg/Kg (ppm)

Basis: Wet

Sample Name	Lab Code	PQL	MDL	Dilution Factor	Date Digested	Date Analyzed	Result	Result Notes
BSC 1-1	L0402100-001	0.4	0.04	1	10/18/04	10/19/04	33	
BSC 1-2	L0402100-002	0.4	0.04	1	10/18/04	10/19/04	10	
BSC 1-3	L0402100-003	0.4	0.04	1	10/18/04	10/19/04	7.2	
BSC 1-4	L0402100-004	0.4	0.04	1	10/18/04	10/19/04	7.0	
Method Blank	L041018-MB3	0.4	0.04	1 .	10/18/04	10/19/04	ND	

Approved By:

1A/020597p

QA/QC Report

Client:

PW Environmental

Project: Sample Matrix: Bauer Manufacturing

Soil

Service Request: L0402100

Date Collected: NA

Date Received: NA

Date Digested: 10/18/04 Date Analyzed: 10/19/04

Matrix Spike/Duplicate Matrix Spike Summary

Lead, Total

Sample Name:

Batch QC

L0402087-005MS

L0402087-005DMS

Units: mg/Kg (ppm)

Basis: Wet

Lab Code: Test Notes:

Percent Recovery

	Prep	Analysis		Spike	Level	Sample	Spike	Result			CAS Acceptance	Relative Percent	Result
Analyte	Method	Method	PQL	MS	DMS	Result	MS	DMS	MS	DMS	Limits	Difference	Notes
Lead, Total	EPA 3050B	6020	0.4	100	100	ND	101	101	101	101	70-130	<1	

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QA/QC Report

Client:

PW Environmental

Service Request: L0402100

Project:

Bauer Manufacturing

Date Collected: NA

LCS Matrix:

Soil

Date Received: NA
Date Digested: 10/18/04
Date Analyzed: 10/19/04

Laboratory Control Sample Summary

Lead, Total

Sample Name:

Lab Control Sample

Units: mg/Kg (ppm)

Lab Code:

L041018-LCS

Basis: NA

Test Notes:

CAS Percent Recovery True Percent Acceptance Result Prep Analysis Value Method Result Recovery Limits Notes Analyte Method EPA 3050B 6020 100 98.3 98 70-130 Lead, Total

Approved By: \_\_\_\_\_\_\_ Date: \_/0/27/04

LCS/020597p

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COTELOHON ETVIROPINETITEL
230 DOVE COURT • SANTA PAULA • CALIFORNIA • 93060
(805) 656-4677 • (805) 525-5563 • FAX (805) 525-2896

CHAIN OF CUSTODY RECORD

(805) 656-4677 • (805) 525-5563 • FAX (805) 525-289	968	Lab:Columbia	Andrhal	ANALYSIS	REQUESTED		
PROJECT NAME: BAUSER MANUFACTURING	EKZ			1244			Et.
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PROJECT MANAGER: ROLD ORLANDO	OF	A 801 N N HCI V	MOXYG		8 lonei	OXYG/E	4-HK 48
SAMPLER SIGNATURE: (2) L JUL JULIANION #154-48	1H.S-9	NS 108	0XXC <sup>2</sup> A 0XXC <sup>2</sup> 1991 <sup>2</sup> 80	:: C∳W	09Z8 K	ter ter	PID Reading,
SAMPLE SAMPLE LOCATION DEPTH DATE TIME ID	MPLE ATRIX	O-H9T	D-H9T TPH-CI 8TEX, FULL	STLC_ TCLP_ Metals	Ethano	(City	Odor, Staining, Other TAT, etc.
Desc! - 1 500th Well 4 1012/01 9:20	8 1.05	X	XI XI I			×	£9h
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Metrodo di si ilpriferit, additional confirments.    Los preliminary data ASAP	MRLs to: S.B. CO IFT PSD-LUFT	Los Angeles T RWCCB	s · Lahontan RWOCB	Central Coast RWOCB	San Bernardino County FD	o KCEHD Kern County	OCHCA Orange County

# SAMPLE RECEIPT FORM

Service Request No: L040 2/00 Client: PWE
Sample(s) delivered by: Client CAS Emp $\angle$ After Hours DHL
Golden State Overnight Fed X UPS Other Courier
Chain of Custody filled out accurately? Yes X No(See Comments)
Appropriate sample volume and containers? Yes No(See Comments)
Sufficient labeling on container(s)?  Yes  No(See Comments)
Container(s) supplied by CAS?  Yes  No (See Comments)
Custody seal(s) intact? N/A Yes No (See Comments)
Trip,Blank(s) received Yes No
If Trip Blank was supplied by CAS, record serial #TB
Temperature of sample(s)/cooler °C Temp Blank? Y of N (Circle One)
Voa's Marked Preserved? Yes No Filled Properly? Yes No (See Comments)
Preserved Bottles Requiring pH check(s)? Yes Appropriate Preservation? Yes No
RUSH Turn around time? Yes Notified Date & Time
Short Hold-Time Analysis (check all that apply)
ASAP Res Cl D.O Flash Diss S2 Ferrous Fe  24HR
Notified Date & Time
Container(s) received and their preservative(s):  # 1 \rightarrow 4
Comments HORS SLEEVE NOVED TO NEW FOLDER
55 / Grozen 55
FACIRES PUT INVARLETER 10/14/04/1345
Initials, Date, Time 10/14/04 1315r:\sr_forms\cooler.doc Rev. 2/25/02



October 18, 2004

Robert Orlando PW Environmental 230 Dove Court Santa Paula, CA 93060

**Bauer Manufacturing** RE:

Dear Robert:

Enclosed are the results of the samples submitted to our laboratory on October 13, 2004. For your reference, these analyses have been assigned our service request number L0402110.

All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed. Columbia Analytical Services is not responsible for use of less than the complete report. Your report contains 19 pages.

Columbia Analytical Services is certified for environmental analyses by the California Department of Health Services (certificate number: 1296A); NELAP (certificate number: 02115CA); Los Angeles County Laboratory ID (No. 10151); and Arizona Department of Health Services (License number: AZ0136 and AZ0544).

If you have any questions, please call me at (818) 587-5550, extension 310.

Respectfully submitted,

Columbia Analytical Services, Inc.

Stuart Sigman **Project Chemist** 

SS/EAB

# Columbia Analytical Services, Inc.

#### Acronyms

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8015M California DHS LUFT Method **ASTM** American Society for Testing and Materials BOD Biochemical Oxygen Demand BLEX Benzene/Toluene/Ethylbenzene/Xylenes CAM California Assessment Metals Chemical Abstract Service Registry Number **CAS Number** CFC Chlorofluorocarbon COD Chemical Oxygen Demand CRDI. Contract Required Detection Limit D Detected; result must be greater than zero. DL Detected; result must be greater than the detection limit. **DLCS Duplicate Laboratory Control Sample** DMS Duplicate Matrix Spike DOH or DHS Department of Health Services **ELAP Environmental Laboratory Accreditation Program EPA** U.S. Environmental Protection Agency  $\mathbf{GC}$ Gas Chromatography GC/MS Gas Chromatography/Mass Spectrometry IC Ion Chromatography **ICB** Initial Calibration Blank sample ICP inductively Coupled Plasma atomic emission spectrometry 1CV Initial Calibration Verification sample **LCS** Laboratory Control Sample Leaking Underground Fuel Tank LUFT Modified M **MBAS** Methylene Blue Active Substances MDL Method Detection Limit MRL Method Reporting Limit MS Matrix Spike **MTBE** Methyl-tert -Butyl Ether NA Not Applicable NC Not Calculated ND None Detected at or above the Method Reporting/Detection Limit (MRL/MDL) NTU Nephelometric Turbidity Units ppb Parts Per Billion Parts Per Million ppm **PQL** Practical Quantitation Limit QA/QC Quality Assurance/Quality Control **RCRA** Resource Conservation and Recovery Act RPD Relative Percent Difference SIM Selected Ion Monitoring SM Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992. STLC Solubility Threshold Limit Concentration swTest Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, Third Edition, 1986 and as amended by Updates I, II, IIA, and IIB. TCLP Toxicity Characteristics Leaching Procedure TDS Total Dissolved Solids TPH Total Petroleum Hydrocarbons TRPH Total Recoverable Petroleum Hydrocarbons TSS **Total Suspended Solids** TTLC Total Threshold Limit Concentration VOA Volatile Organic Analyte(s) **Oualifiers** U Undetected at or above MDL/MRL. J Estimated concentration. Analyte detected above MDL but below MRL. В Hit above MRL also found in Method Blank. E Analyte concentration above high point of ICAL N Presumptive evidence of compound. D Result from dilution. X See case narrative

Client: Project: PW Environmental

Bauer Manufacturing

Sample Matrix:

Soil

Service Request No.: L0402110

Date Received:

10/13/04

#### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory Control Sample (LCS).

#### Sample Receipt

Soil samples were received for analysis at Columbia Analytical Services on 10/13/04. No discrepancies were noted upon initial sample inspection. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored at 4°C upon receipt at the laboratory.

#### Volatile Organic Compounds by EPA Method 8260B

The upper control criterion was exceeded for Methyl tert-Butyl Ether in samples BSP1-2MS and BSP1-2DMS. The analyte in question was not detected in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

The upper control criterion was exceeded for the following analytes in Laboratory Control Sample (LCS) LWG0403749-3: Methyl tert-Butyl Ether and tert-Butyl Ethyl Ether. The analytes in question were not detected in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

### Gasoline Range Organics by EPA Method 8015M

No anomalies were encountered.

Approved by	55	2	Date	10/18/0	4
		J			7-

Client: Project: PW Environmental Bauer Manufacturing Service Request:

L0402110

Cover Page - Organic Analysis Data Package **Volatile Organic Compounds** 

Sample Name	Lab Code	Date Collected	Date Received
BSP1-1	L0402110-001	10/12/2004	10/13/2004
BSP1-2	L0402110-002	10/12/2004	10/13/2004
BSP1-2MS	LWG0403749-1	10/12/2004	10/13/2004
BSP1-2DMS	LWG0403749-2	10/12/2004	10/13/2004

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Cover Page - Organic

Page 1 of

#### **Analytical Results**

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402110 Date Collected: 10/12/2004

**Date Received:** 10/13/2004

# **Volatile Organic Compounds**

Sample Name:

BSP1-1

Lab Code:

L0402110-001

Extraction Method:

EPA 5035

Units: ug/Kg Basis: Wet

Level: Low

Analysis Method:

8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	4.5	1.1	1	10/15/04	10/15/04	LWG0403749	<del></del>
Toluene	ND U	4.5	1.2	1	10/15/04	10/15/04	LWG0403749	
Ethylbenzene	ND U	4.5	1.2	1	10/15/04	10/15/04	LWG0403749	
Total Xylenes	ND U	14	3.9	1	10/15/04	10/15/04	LWG0403749	
Methyl tert-Butyl Ether	ND U	9.0	2.5	1	10/15/04	10/15/04	LWG0403749	
tert-Butyl Alcohol	ND U	45	23	1	10/15/04	10/15/04	LWG0403749	
Diisopropyl Ether	ND U	9.0	2,1	1	10/15/04	10/15/04	LWG0403749	
tert-Butyl Ethyl Ether	. ND U	9.0	2.1	1	10/15/04	10/15/04	LWG0403749	
tert-Amyl Methyl Ether	ND U	9.0	2.3	1	10/15/04	10/15/04	LWG0403749	
1,2-Dibromoethane (EDB)	ND U	4.5	1.1	1	10/15/04	10/15/04	LWG0403749	
1,2-Dichloroethane (EDC)	ND U	4.5	1.1	1	10/15/04	10/15/04	LWG0403749	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	100	62-136	10/15/04	Acceptable
Toluene-d8	96	67-131	10/15/04	Acceptable
4-Bromofluorobenzene	92	64-130	10/15/04	Acceptable

Comments:

5

Analytical Results

Client:

PW Environmental

Project: Sample Matrix: Bauer Manufacturing

Soil

Service Request: L0402110 Date Collected: 10/12/2004

**Date Received:** 10/13/2004

# **Volatile Organic Compounds**

Sample Name:

BSP1-2

Lab Code:

L0402110-002

Extraction Method: EPA 5035

Analysis Method:

8260B

Units: ug/Kg Basis: Wet

Level: Low

Analyte Name	Result	Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	4.9	1.1	1	10/15/04	10/15/04	LWG0403749	
Toluene	ND	U	4.9	1.2	1	10/15/04	10/15/04	LWG0403749	
Ethylbenzene	ND	U	4.9	1.2	1	10/15/04	10/15/04	LWG0403749	
Total Xylenes	ND	U	15	3.9	1	10/15/04	10/15/04	LWG0403749	
Methyl tert-Butyl Ether	ND	U	9.7	2.5	1	10/15/04	10/15/04	LWG0403749	
tert-Butyl Alcohol	ND	U	49	23	1	10/15/04	10/15/04	LWG0403749	
Diisopropyl Ether	ND	U	9.7	2,1	1	10/15/04	10/15/04	LWG0403749	
tert-Butyl Ethyl Ether	ND	U	9.7	2.1	1	10/15/04	10/15/04	LWG0403749	
tert-Amyl Methyl Ether	ND	U	9.7	2.3	1	10/15/04	10/15/04	LWG0403749	
1,2-Dibromoethane (EDB)	ND	U	4.9	1.1	<u> </u>	10/15/04	10/15/04	LWG0403749	
1,2-Dichloroethane (EDC)	ND	U	4.9	1.1	1	10/15/04	10/15/04	LWG0403749	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Dibromofluoromethane	94	62-136	10/15/04	Acceptable	
Toluene-d8	89	67-131	10/15/04	Acceptable	
4-Bromofluorobenzene	86	64-130	10/15/04	Acceptable	

Comments:

Page

Analytical Results

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402110

Date Collected: NA Date Received: NA

### Volatile Organic Compounds

Sample Name: Lab Code:

Method Blank

Extraction Method: Analysis Method:

EPA 5035 8260B

LWG0403749-4

Units: ug/Kg Basis: Wet

Level: Low

Dilution Date Date Extraction Analyte Name Result Q **PQL MDL Factor** Extracted Analyzed Lot Note Benzene ND U 5.0 LWG0403749 1.1 1 10/15/04 10/15/04 Toluene ND U 5.0 1.2 1 10/15/04 10/15/04 LWG0403749 Ethylbenzene ND U 5.0 1.2 1 10/15/04 10/15/04 LWG0403749 Total Xylenes 15 3.9 ND U 1 10/15/04 10/15/04 LWG0403749 Methyl tert-Butyl Ether ND U 10 2.5 1 10/15/04 10/15/04 LWG0403749 tert-Butyl Alcohol ND U 50 23 1 10/15/04 10/15/04 LWG0403749 Diisopropyl Ether ND U 10 2.1 1 LWG0403749 10/15/04 10/15/04 tert-Butyl Ethyl Ether ND U 10 2.1 1 10/15/04 10/15/04 LWG0403749 tert-Amyl Methyl Ether ND U 10 2.3 1 10/15/04 10/15/04 LWG0403749 1,2-Dibromoethane (EDB) 1 ND U 5.0 1.1 10/15/04 10/15/04 LWG0403749 1,2-Dichloroethane (EDC) ND U 5.0 1.1 1 10/15/04 LWG0403749 10/15/04

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	99	62-136	10/15/04	Acceptable
Toluene-d8	100	67-131	10/15/04	Acceptable
4-Bromofluorobenzene	99	64-130	10/15/04	Acceptable

Comments:

QA/QC Report

Client:

PW Environmental

Project: Sample Matrix: Bauer Manufacturing

Soil

Service Request: L0402110

Surrogate Recovery Summary **Volatile Organic Compounds** 

Extraction Method: Analysis Method:

EPA 5035

8260B

Units: PERCENT

Level: Low

Sample Name	Lab Code	<u>Sur1</u>	Sur2	Sur3
BSP1-1	L0402110-001	100	96	92
BSP1-2	L0402110-002	94	89	86
Method Blank	LWG0403749-4	99	100	99
BSP1-2MS	LWG0403749-1	108	99	92
BSP1-2DMS	LWG0403749-2	106	95	91
Lab Control Sample	LWG0403749-3	97	101	97

Surrogate Recovery Control Limits (%)

Sur1 = Dibromofluoromethane 62-136 Sur2 = Toluene-d8 67-131 Sur3 = 4-Bromofluorobenzene 64-130

Results flagged with an asterisk (\*) indicate values outside control criteria. Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402110 Date Extracted: 10/15/2004

**Date Analyzed:** 10/15/2004

Matrix Spike/Duplicate Matrix Spike Summary **Volatile Organic Compounds** 

Sample Name:

BSP1-2

Lab Code:

L0402110-002

Extraction Method:

EPA 5035

Analysis Method:

8260B

Units: ug/Kg Basis: Wet

Level: Low

Extraction Lot: LWG0403749

BSP1-2MS

**BSP1-2DMS** 

	Sample	_	VG0403749- Matrix Spike	1		VG0403749-2 cate Matrix S		%Rec		RPD
Analyte Name	Result	Result	Expected	%Rec	Result	Expected	%Rec	Limits	RPD	Limit
Benzene	ND	18.7	19.2	97	20.3	19.2	105	50-135	8	30
Toluene	ND	18.7	19.2	97	20.0	19.2	104	58-127	6	30
Ethylbenzene	ND	19.2	19.2	100	21.5	19.2	112	52-132	11	30
Methyl tert-Butyl Ether	ND	60.1	38.5	156 *	60.9	38.5	158 *	41-150	1	30
1,2-Dichloroethane (EDC)	ND	19.2	19.2	100	19.8	19.2	103	55-141	3	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Project: PW Environmental Bauer Manufacturing Service Request: L0402110 Date Extracted: 10/15/2004

Sample Matrix:

Soil

Date Analyzed: 10/15/2004

Lab Control Spike Summary Volatile Organic Compounds

Extraction Method: EPA 5035 **Analysis Method:** 

8260B

Units: ug/Kg

Basis: Wet

Extraction Lot: LWG0403749

Level: Low

Lab Control Sample LWG0403749-3 Lab Control Spike

	%Rec			
Analyte Name	Result	Expected	%Rec	Limits
Benzene	18.8	20.0	94	64-125
Toluene	19.5	20.0	97	69-119
Ethylbenzene	19.5	20.0	97	68-120
Total Xylenes	57.5	60.0	96	65-121
Methyl tert-Butyl Ether	54.8	40.0	137 *	64-131
tert-Butyl Alcohol	462	400	116	60-128
Diisopropyl Ether	43.3	40.0	108	70-124
tert-Butyl Ethyl Ether	51.9	40.0	130 *	70-126
tert-Amyl Methyl Ether	47.7	40.0	119	74-122
1,2-Dibromoethane (EDB)	18.9	20.0	94	74-118
1,2-Dichloroethane (EDC)	17.6	20.0	88	65-128

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Project: PW Environmental Bauer Manufacturing Service Request:

L0402110

Cover Page - Organic Analysis Data Package Gasoline Range Organics (GRO)

		Date	Date
Sample Name	Lab Code	Collected	Received
BSP1-1	L0402110-001	10/12/2004	10/13/2004
BSP1-2	L0402110-002	10/12/2004	10/13/2004
BSP1-2MS	LWG0403753-1	10/12/2004	10/13/2004
BSP1-2DMS	LWG0403753-2	10/12/2004	10/13/2004

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Name: Stuart Sigman

Title: Project Chemist

Cover Page - Organic

Page 1 of

Analytical Results

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Service Request: L0402110 Date Collected: 10/12/2004

Date Received: 10/13/2004

Gasoline Range Organics (GRO)

Sample Name:

BSP1-1

Lab Code:

L0402110-001

**Extraction Method:** 

EPA 5035

Units: mg/Kg

Basis: Wet

Level: Low

Analysis Method:

8015B

Dilution Date Date Extraction **PQL MDL Factor** Extracted Analyzed Lot Note Result Q **Analyte Name** LWG0403753 10/16/04 10/16/04 0.095 0.045 Gasoline ND U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	85	58-119	10/16/04	Acceptable	

Comments:

Analytical Results

Client: Project: PW Environmental

Sample Matrix:

Bauer Manufacturing

Soil

Service Request: L0402110 Date Collected: 10/12/2004

Date Received: 10/13/2004

Gasoline Range Organics (GRO)

Sample Name:

BSP1-2

Lab Code:

L0402110-002

**Extraction Method:** 

EPA 5035

Units: mg/Kg

Basis: Wet

Level: Low

Analysis Method:

8015B

				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline	ND U	0.099	0.045	1	10/16/04	10/16/04	LWG0403753	-

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	85	58-119	10/16/04	Acceptable	

Comments:

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13 Form 1A - Organic

Page

1 of 1

SuperSet Reference: RR7548

**Analytical Results** 

Client:

PW Environmental

Project: Sample Matrix: Bauer Manufacturing

Soil

Service Request: L0402110

Date Collected: NA Date Received: NA

Gasoline Range Organics (GRO)

Sample Name:

Method Blank

Lab Code:

LWG0403753-4

Extraction Method: EPA 5035 Analysis Method:

Units: mg/Kg

Basis: Wet

Level: Low

8015B

				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline	ND U	0.10	0.045	1	10/16/04	10/16/04	LWG0403753	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	93	58-119	10/16/04	Acceptable	

Comments:

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Form 1A - Organic

Page

1 of 1

QA/QC Report

Client: Project: PW Environmental

Bauer Manufacturing

Sample Matrix:

Soil

**Surrogate Recovery Summary** Gasoline Range Organics (GRO)

Extraction Method: Analysis Method:

EPA 5035

8015B

Units: PERCENT

Service Request: L0402110

Level: Low

Sample Name	Lab Code	Sur1
BSP1-1	L0402110-001	85
BSP1-2	L0402110-002	85
Method Blank	LWG0403753-4	93
BSP1-2MS	LWG0403753-1	96
BSP1-2DMS	LWG0403753-2	102
Lab Control Sample	LWG0403753-3	105

Surrogate Recovery Control Limits (%)

Sur1 = Bromofluorobenzene

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58-119

Results flagged with an asterisk (\*) Indicate values outside control criteria. Results flagged with a pound (#) indicate the control criteria is not applicable.

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Form 2A - Organic

Page 1 of

RR7548

SuperSet Reference:

QA/QC Report

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402110

**Date Extracted:** 10/16/2004

**Date Analyzed:** 10/16/2004

Matrix Spike/Duplicate Matrix Spike Summary Gasoline Range Organics (GRO)

Sample Name:

BSP1-2

Lab Code:

L0402110-002

Extraction Method:

Analysis Method:

8015B

EPA 5035

Units: mg/Kg Basis: Wet

Level: Low

Extraction Lot: LWG0403753

BSP1-2MS LWG0403753-1

BSP1-2DMS

LWG0403753-2

	Sample		Matrix Spike	<u></u>		cate Matrix S		%Rec		RPD
Analyte Name	Result	Result	Expected	%Rec	Result	Expected	%Rec	Limits	RPD	Limit
Gasoline	ND	0.821	1.00	82	0.759	0.926	82	62-121	8	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Project: PW Environmental Bauer Manufacturing

Sample Matrix:

Soil

Service Request: L0402110 Date Extracted: 10/16/2004

**Date Analyzed:** 10/16/2004

Lab Control Spike Summary Gasoline Range Organics (GRO)

**Extraction Method: Analysis Method:** 

EPA 5035 8015B

Units: mg/Kg Basis: Wet Level: Low

Extraction Lot: LWG0403753

Lab Control Sample LWG0403753-3

Lab Control Spike

%Rec

Expected %Rec Analyte Name Result

Limits

0.953 1.00 95 76-117 Gasoline

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ENVIRONMENTAL (0402// CHAIN OF CUSTODY RECORD 130 DOVE COURT • SANTA PAULA • CALIFORNIA • 93060 [805] 656-4677 • (805) 525-5563 • FAX (805) 525-2896 [Lab: //...l.; //...l.; //...l., //...l., //...l.) ANALYSIS REOUTSTED - Location in the contract of Lab: / Jon Sic Analysis ANALYSIS REQUESTED

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PROJECT NAME: 3 GLOCA MANUTACTURE IN THE			1247			7	Sherif
PROJECT ADDRESS: 1140 South Wills OR /			10358			0-103) 7-103) 7-103)	
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PROJECT MANAGER: Robert ( ) Planso	M ) HCl I	evel 80 M - N 5M E	Dissolve	1 PP1	80	OXYG/E NTBE (C	
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L Fax preliminary data ASAP				1	1 -	6	לייויט

# SAMPLE RECEIPT FORM

Sample(s) delivered by: Client CAS Emp
Chain of Custody filled out accurately? Yes No (See Comments)  Appropriate sample volume and containers? Yes No (See Comments)  Sufficient labeling on container(s)? Yes No (See Comments)  Container(s) supplied by CAS? Yes No (See Comments)  Custody seal(s) intact? N/A Yes No (See Comments)  Trip_Blank(s) received Yes No (See Comments)  If Trip_Blank was supplied by CAS, record serial #
Appropriate sample volume and containers? Yes/ No(See Comments)  Sufficient labeling on container(s)? Yes/ No(See Comments)  Container(s) supplied by CAS? Yes No(See Comments)  Custody seal(s) intact? N/A/ Yes No(See Comments)  Trip Blank(s) received Yes No(See Comments)  If Trip Blank was supplied by CAS, record serial #
Sufficient labeling on container(s)?  Yes No(See Comments)  Container(s) supplied by CAS?  Yes No(See Comments)  Custody seal(s) intact?  N/A/ Yes No(See Comments)  Trip_Blank(s) received  Yes No  If Trip Blank was supplied by CAS, record serial #  Temperature of sample(s)/cooler °C Temp Blank? Y of N Circle One)  Voa's Marked Preserved? Yes No Filled Properly? Yes No (See Comments)  Preserved Bottles Requiring pH check(s)? Yes Appropriate Preservation? Yes No  RUSH Turn around time? Yes Notified Date & Time ISC  Short Hold-Time Analysis (check all that apply)  ASAP Res Cl D.O Flash Diss S2 Ferrous Fe  24HR pH Odor Cr+6  48HR BOD Color MBAS Nitrate
Container(s) supplied by CAS?  Yes No (See Comments)  Custody seal(s) intact?
Custody seal(s) intact?  N/A
Trip Blank(s) received  Yes No  If Trip Blank was supplied by CAS, record serial #  Temperature of sample(s)/cooler °C Temp Blank? Y or N Circle One)  Voa's Marked Preserved? Yes No Filled Properly? Yes No (See Comments)  Preserved Bottles Requiring pH check(s)? Yes Appropriate Preservation? Yes No  RUSH Turn around time? Yes Notified Date & Time One
If Trip Blank was supplied by CAS, record serial #
Temperature of sample(s)/cooler °C Temp Blank? Y or N Circle One)  Voa's Marked Preserved? Yes No (See Comments)  Preserved Bottles Requiring pH check(s)? Yes Appropriate Preservation? Yes No  RUSH Turn around time? Yes / Notified Date & Time Date & Time One
Voa's Marked Preserved? Yes No Filled Properly? Yes No (See Comments)  Preserved Bottles Requiring pH check(s)? Yes Appropriate Preservation? Yes No  RUSH Turn around time? Yes Notified Date & Time Date & Time ISS Ferrous Fe Short Hold-Time Analysis (check all that apply)  ASAP
Preserved Bottles Requiring pH check(s)? Yes Appropriate Preservation? Yes No  RUSH Turn around time? Yes Notified Date & Time USC Short Hold-Time Analysis (check all that apply)  ASAP
RUSH Turn around time? Yes Notified
Short Hold-Time Analysis (check all that apply)  ASAP Res Cl D.O Flash Diss S2 Ferrous Fe  24HR
ASAP Res Cl D.O Flash Diss S2 Ferrous Fe
24HR pH Odor Cr+6  48HR BOD Color MBAS Nitrate  Nitrite O-PO4 Sett Sol Turbidity  72HR Vapors  Notified Date & Time  Container(s) received and their preservative(s)
48HR BOD Color MBAS Nitrate  Nitrite O-PO4 Sett Sol Turbidity  72HR Vapors  Date & Time  Container(s) received and their preservative(s)
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Comments KUSH
Initials Date Time 16 (1)/5/04 0945



October 28, 2004

Robert Orlando PW Environmental 230 Dove Court Santa Paula, CA 93060

RE: Bauer & Collins

Dear Robert:

Enclosed are the results of the samples submitted to our laboratory on October 14, 2004. For your reference, these analyses have been assigned our service request number L0402108.

All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed. Columbia Analytical Services is not responsible for use of less than the complete report. Your report contains 26 pages.

Columbia Analytical Services is certified for environmental analyses by the California Department of Health Services (certificate number: 1296A); NELAP (certificate number: 02115CA); Los Angeles County Laboratory ID (No. 10151); and Arizona Department of Health Services (License number: AZ0136 and AZ0544).

If you have any questions, please call me at (818) 587-5550, extension 310.

Respectfully submitted,

Columbia Analytical Services, Inc.

Stuart Sigman Project Chemist

SS/EAB

# Columbia Analytical Services, Inc.

#### Acronyms

8015M California DHS LUFT Method

ASTM American Society for Testing and Materials

BOD Biochemical Oxygen Demand

BTEX Benzene/Toluene/Ethylbenzene/Xylenes

CAM California Assessment Metals

CAS Number Chemical Abstract Service Registry Number

CFC Chlorofluorocarbon
COD Chemical Oxygen Demand
CRDL Contract Required Detection Limit
D Detected; result must be greater than zero.

DL Detected; result must be greater than the detection limit.

DLCS Duplicate Laboratory Control Sample

DMS Duplicate Matrix Spike
DOH or DHS Department of Health Services

ELAP Environmental Laboratory Accreditation Program

EPA U.S. Environmental Protection Agency

GC Gas Chromatography

GC/MS Gas Chromatography/Mass Spectrometry

IC Ion Chromatography

ICB Initial Calibration Blank sample

ICP Inductively Coupled Plasma atomic emission spectrometry

ICV Initial Calibration Verification sample

LCS Laboratory Control Sample
LUFT Leaking Underground Fuel Tank

M Modified

MBAS Methylene Blue Active Substances

MDL Method Detection Limit
MRL Method Reporting Limit

MS Matrix Spike

MTBE Methyl-tert-Butyl Ether

NA Not Applicable NC Not Calculated

ND None Detected at or above the Method Reporting/Detection Limit (MRL/MDL)

NTU Nephelometric Turbidity Units

ppb Parts Per Billion ppm Parts Per Million

PQL Practical Quantitation Limit
QA/QC Quality Assurance/Quality Control
RCRA Resource Conservation and Recovery Act

RPD Relative Percent Difference SIM Selected Ion Monitoring

SM Standard Methods for the Examination of Water and Wastewater 18th Ed., 1992.

STLC Solubility Threshold Limit Concentration

SW Test Methods for Evaluating Solid Waste, Physical/Chemical MethodsSW-846,

Third Edition, 1986 and as amended by Updates I, II, IIA, and IIB.

TCLP Toxicity Characteristics Leaching Procedure

TDS Total Dissolved Solids
TPH Total Petroleum Hydrocarbons

TRPH Total Recoverable Petroleum Hydrocarbons

TSS Total Suspended Solids

TTLC Total Threshold Limit Concentration

VOA Volatile Organic Analyte(s)

#### Qualifiers

U Undetected at or above MDL/MRL (PQL).

J Estimated concentration. Analyte detected above MDL but below MRL (PQL).

B Hit above MRL (PQL) also found in Method Blank.
E Analyte concentration above high point of ICAL.

D Result from dilution.
X See case narrative.

Client:

PW Environmental

Project:

Bauer & Collins

Soil

Sample Matrix:

Service Request No.: L0402108

Date Received:

10/14/04

#### **CASE NARRATIVE**

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

#### Sample Receipt

Soil samples were received for analysis at Columbia Analytical Services on 10/14/04. No discrepancies were noted upon initial sample inspection. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored at 4°C or frozen at -20°C upon receipt at the laboratory.

#### Volatile Organic Compounds by EPA Method 8260B

The upper control criterion was exceeded for Methyl tert-Butyl Ether in samples BSCb1-2MS and BSCb1-2DMS. The analyte in question was not detected in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

The upper control criterion was exceeded for the following analytes in Laboratory Control Sample (LCS) LWG0403749-3: Methyl tert-Butyl Ether and tert-Butyl Ethyl Ether. The analytes in question were not detected in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

#### Gasoline Range Organics by EPA Method 8015M

Sample BSCb1-1 was analyzed as medium level soil required dilution due to the presence of elevated levels of target analyte. The reporting limits are adjusted to reflect the dilution.

The control criterion was exceeded for the Bromofluorobenzene surrogates in sample BSCb1-1 due to matrix interferences. Due to the presence of background components that prevented adequate resolution of the surrogate, accurate quantitation was not possible. No further corrective action was appropriate.

#### **Total Metals**

Batch QC was run along with these samples. These results are provided for information purposes only. The Method Blank and Laboratory Control Sample were within control criteria. No anomalies were encountered during this analysis.

Approved by	55 n	Date	10/28	104
				,

Client: Project: PW Environmental Bauer & Collins

Service Request:

L0402108

Cover Page - Organic Analysis Data Package Volatile Organic Compounds

Sample Name	Lab Code	Date Collected	Date Received
BSCb1-1	L0402108-001	10/13/2004	10/14/2004
BSCb1-2	L0402108-002	10/13/2004	10/14/2004
BSCb1-3	L0402108-003	10/13/2004	10/14/2004

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Name: Stuart Sigman

Title: Project Chemist

Cover Page - Organic

Page 1 of

Analytical Results

Client: Project:

PW Environmental Bauer & Collins

Sample Matrix:

Soil

Service Request: L0402108

Date Collected: 10/13/2004

Date Received: 10/14/2004

Volatile Organic Compounds

Sample Name: Lab Code:

BSCb1-1

L0402108-001

Extraction Method: EPA 5035

Units: ug/Kg Basis: Wet

Level: Low

Analysis Method:

8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	4.2	1.1	1	10/15/04	10/15/04	LWG0403749	
Toluene	ND U	4.2	1.2	1	10/15/04	10/15/04	LWG0403749	
Ethylbenzene	ND U	4.2	1.2	1	10/15/04	10/15/04	LWG0403749	
Total Xylenes	ND U	13	3.9	1	10/15/04	10/15/04	LWG0403749	
Methyl tert-Butyl Ether	ND U	8.4	2.5	1	10/15/04	10/15/04	LWG0403749	
tert-Butyl Alcohol	ND U	42	23	1	10/15/04	10/15/04	LWG0403749	
Diisopropyl Ether	ND U	8.4	2.1	1	10/15/04	10/15/04	LWG0403749	
tert-Butyl Ethyl Ether	ND U	8.4	2.1	1	10/15/04	10/15/04	LWG0403749	
tert-Amyl Methyl Ether	ND U	8.4	2.3	1	10/15/04	10/15/04	LWG0403749	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Dibromofluoromethane	101	62-136	10/15/04	Acceptable	
Toluene-d8	106	67-131	10/15/04	Acceptable	
4-Bromofluorobenzene	121	64-130	10/15/04	Acceptable	

Comments:

**Analytical Results** 

Client: Project: Sample Matrix: PW Environmental Bauer & Collins

Soil

Service Request: L0402108 Date Collected: 10/13/2004

Date Received: 10/14/2004

# **Volatile Organic Compounds**

Sample Name: Lab Code:

BSCb1-2 L0402108-002

Extraction Method: Analysis Method:

EPA 5035 8260B

Units: ug/Kg Basis: Wet

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	4.4	1.1	1	10/15/04	10/15/04	LWG0403749	
Toluene	ND U	4.4	1.2	1	10/15/04	10/15/04	LWG0403749	
Ethylbenzene	ND U	4.4	1.2	1	10/15/04	10/15/04	LWG0403749	
Total Xylenes	ND U	13	3.9	1	10/15/04	10/15/04	LWG0403749	
Methyl tert-Butyl Ether	ND U	8.7	2.5	1	10/15/04	10/15/04	LWG0403749	
tert-Butyl Alcohol	ND U	44	23	1	10/15/04	10/15/04	LWG0403749	
Diisopropyl Ether	ND U	8.7	2.1	1	10/15/04	10/15/04	LWG0403749	
tert-Butyl Ethyl Ether	ND U	8.7	2.1	1	10/15/04	10/15/04	LWG0403749	
tert-Amyl Methyl Ether	ND U	8.7	2.3	1	10/15/04	10/15/04	LWG0403749	

Surrogate Name	%Rec	' Control Limits	Date Analyzed	Note	
Dibromofluoromethane	100	62-136	10/15/04	Acceptable	
Toluene-d8	101	67-131	10/15/04	Acceptable	
4-Bromofluorobenzene	98	64-130	10/15/04	Acceptable	

Comments:

6

RR7563

**Analytical Results** 

Client: Project: PW Environmental Bauer & Collins

Sample Matrix:

Soil

Service Request: L0402108 Date Collected: 10/13/2004

Date Received: 10/14/2004

# Volatile Organic Compounds

Sample Name:

BSCb1-3

Units: ug/Kg Basis: Wet

Lab Code:

L0402108-003

Level: Low

**Extraction Method:** Analysis Method:

EPA 5035 8260B

Analyte Name	Result	Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	4.7	1.1	1	10/15/04	10/15/04	LWG0403749	
Toluene	ND	U	4.7	1.2	1	10/15/04	10/15/04	LWG0403749	
Ethylbenzene	ND	U	4.7	1.2	1	10/15/04	10/15/04	LWG0403749	
Total Xylenes	ND	U	14	3.9	1	10/15/04	10/15/04	LWG0403749	
Methyl tert-Butyl Ether	ND	U	9.3	2.5	1	10/15/04	10/15/04	LWG0403749	
tert-Butyl Alcohol	ND	U	47	23	1	10/15/04	10/15/04	LWG0403749	
Diisopropyl Ether	ND	Ū	9.3	2.1	1	10/15/04	10/15/04	LWG0403749	. ——
tert-Butyl Ethyl Ether	ND	U	9.3	2.1	1	10/15/04	10/15/04	LWG0403749	
tert-Amyl Methyl Ether	ND	U	9.3	2.3	1	10/15/04	10/15/04	LWG0403749	

Surrogate Name	%Rec	' Control Limits	Date Analyzed	Note	
Dibromofluoromethane	97	62-136	10/15/04	Acceptable	
Toluene-d8	96	67-131	10/15/04	Acceptable .	
4-Bromofluorobenzene	91	64-130	10/15/04	Acceptable	

Comments:

Analytical Results

Client: Project: PW Environmental Bauer & Collins

Sample Matrix:

Soil

Service Request: L0402108

Date Collected: NA Date Received: NA

## **Volatile Organic Compounds**

Sample Name:

Lab Code:

Method Blank LWG0403749-4

Extraction Method:

EPA 5035

Analysis Method:

8260B

Units: ug/Kg Basis: Wet

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	5.0	1.1	1	10/15/04	10/15/04	LWG0403749	
Toluene	ND U	5.0	1.2	1	10/15/04	10/15/04	LWG0403749	
Ethylbenzene	ND U	5.0	1.2	1	10/15/04	10/15/04	LWG0403749	
Total Xylenes	ND U	15	3.9	1	10/15/04	10/15/04	LWG0403749	
Methyl tert-Butyl Ether	ND U	10	2.5	1	10/15/04	10/15/04	LWG0403749	
tert-Butyl Alcohol	ND U	50	23	1	10/15/04	10/15/04	LWG0403749	
Diisopropyl Ether	ND U	10	2.1	1	10/15/04	10/15/04	LWG0403749	
tert-Butyl Ethyl Ether	ND U	10	2.1	1	10/15/04	10/15/04	LWG0403749	
tert-Amyl Methyl Ether	ND U	10	2.3	1	10/15/04	10/15/04	LWG0403749	

Surrogate Name	%Rec	' Control Limits	Date Analyzed	Note	
Dibromofluoromethane	99	62-136	10/15/04	Acceptable	
Toluene-d8	100	67-131	10/15/04	Acceptable	
4-Bromofluorobenzene	99	64-130	10/15/04	Acceptable	

Comments:

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Form 1A - Organic

QA/QC Report

Client: Project: PW Environmental

Sample Matrix:

Bauer & Collins

Soil

Surrogate Recovery Summary **Volatile Organic Compounds** 

Extraction Method: Analysis Method

EPA 5035 8260B

Service Request: L0402108

Units: PERCENT

Level: Low

Allarysis Method.	0200D	
Sample Name		<u>Lab</u>

Sample Name	Lab Code	Sur1	Sur2	<u>Sur3</u>
BSCb1-1	L0402108-001	101	106	121
BSCb1-2	L0402108-002	100	101	98
BSCb1-3	L0402108-003	97	96	91
Method Blank	LWG0403749-4	99	100	99
Batch QC	L0402110-002	94	89	86
Batch QCMS	LWG0403749-1	108	99	92
Batch QCDMS	LWG0403749-2	106	95	91
Lab Control Sample	LWG0403749-3	97	101	97

Surrogate Recovery Control Limits (%)

Sur1 = Dibromofluoromethane 62-136 Sur2 = Toluene-d8 67-131 Sur3 = 4-Bromofluorobenzene 64-130

Results flagged with an asterisk (\*) indicate values outside control criteria. Results flagged with a pound (#) indicate the control criteria is not applicable.

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Form 2A - Organic

Page 1 of 1

Printed: 10/18/2004 12:03:20 P:\STEALTH\CRYSTAL.RPT\Form2.rpt

SuperSet Reference:

RR7563

QA/QC Report

Client: Project: PW Environmental Bauer & Collins

Sample Matrix:

Soil

**Date Extracted:** 10/15/2004 **Date Analyzed:** 10/15/2004

Matrix Spike/Duplicate Matrix Spike Summary Volatile Organic Compounds

Sample Name: Lab Code: Batch QC

L0402110-002

Extraction Method: Analysis Method:

EPA 5035 8260B Units: ug/Kg
Basis: Wet

Basis: Wet

Level: Low Extraction Lot: LWG0403749

Batch QCMS

Batch QCDMS LWG0403749-2

	Sample		VG0403749- Matrix Spike	1	LWG0403749-2 Duplicate Matrix Spike			%Rec		RPD
Analyte Name	Result	Result	Expected	%Rec	Result	Expected	%Rec	Limits	RPD	Limit
Benzene	ND	18.7	19.2	97	20.3	19.2	105	50-135	8	30
Toluene	ND	18.7	19.2	97	20.0	19.2	104	58-127	6	30
Ethylbenzene	ND	19.2	19.2	100	21.5	19.2	112	52-132	11	30
Methyl tert-Butyl Ether	ND	60.1	38.5	156 *	60.9	38.5	158 *	41-150	1	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Project: PW Environmental Bauer & Collins

Sample Matrix:

Soil

Service Request: L0402108 Date Extracted: 10/15/2004

**Date Analyzed:** 10/15/2004

Lab Control Spike Summary Volatile Organic Compounds

Extraction Method: Analysis Method:

EPA 5035 8260B

Units: ug/Kg Basis: Wet

Level: Low

Extraction Lot: LWG0403749

Lab Control Sample LWG0403749-3 Lab Control Spike

LAU	Lab Control Spike		
Result	Expected	%Rec	%Rec Limits
18.8	20.0	94	64-125
19.5	20.0	97	69-119
19.5	20.0	97	68-120
57.5	60.0	96	65-121
54.8	40.0	137 *	64-131
462	400	116	60-128
43.3	40.0	108	70-124
51.9	40.0	130 *	70-126
47.7	40.0	119	74-122
	18.8 19.5 19.5 57.5 54.8 462 43.3 51.9	Result         Expected           18.8         20.0           19.5         20.0           19.5         20.0           57.5         60.0           54.8         40.0           462         400           43.3         40.0           51.9         40.0	18.8 20.0 94 19.5 20.0 97 19.5 20.0 97 57.5 60.0 96 54.8 40.0 137 * 462 400 116 43.3 40.0 108 51.9 40.0 130 *

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Project: PW Environmental Bauer & Collins

Service Request:

L0402108

Cover Page - Organic Analysis Data Package Gasoline Range Organics (GRO)

		Date	Date
Sample Name	Lab Code	Collected	Received
BSCb1-1	L0402108-001	10/13/2004	10/14/2004
BSCb1-2	L0402108-002	10/13/2004	10/14/2004
BSCb1-3	L0402108-003	10/13/2004	10/14/2004

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Name: Start Sigman

Title: Project Chmist

Cover Page - Organic

Page 1 of

Analytical Results

Client: Project: PW Environmental Bauer & Collins

Sample Matrix:

Soil

Service Request: L0402108

Date Collected: 10/13/2004

**Date Received:** 10/14/2004

Gasoline Range Organics (GRO)

Sample Name:

BSCb1-1

Lab Code:

L0402108-001

**Extraction Method:** 

EPA 5035

Units: mg/Kg Basis: Wet

Level: Med

Analysis Method:

8015B

Dilution Date Date Extraction

Analyte Name

Result Q

**PQL** 

**MDL** 

**Factor** Extracted

Analyzed

Lot

Note

Gasoline 210 D 9.0 4.6 2 10/22/04 10/23/04 LWG0403841

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	643	62-133	10/23/04	Outside Control Limits

Comments:

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Form IA - Organic

Page

I of I

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Merged

SuperSet Reference:

RR7667

**Analytical Results** 

Client: Project: PW Environmental Bauer & Collins

Sample Matrix:

Soil

Service Request: L0402108 **Date Collected:** 10/13/2004

**Date Received:** 10/14/2004

Gasoline Range Organics (GRO)

Sample Name: Lab Code:

BSCb1-2

**Extraction Method:** 

L0402108-002

Analysis Method:

EPA 5035 8015B

Units: mg/Kg

Basis: Wet

Level: Low

A	n 14 0	no.	MOL	Dilution	Date	Date	Extraction	<b>N</b> Y - 4 -
Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline	ND U	0.085	0.045	1	10/23/04	10/23/04	LWG0403834	

Surrogate Name	%Rec	Control . Limits	Date Analyzed	Note
Bromofluorobenzene	69	58-119	10/23/04 /	Acceptable

Comments:

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Merged

Analytical Results

Client: Project: PW Environmental Bauer & Collins

Sample Matrix:

Soil

Service Request: L0402108

Date Collected: 10/13/2004

**Date Received:** 10/14/2004

Gasoline Range Organics (GRO)

Sample Name:

BSCb1-3

Lab Code:

L0402108-003

Extraction Method: Analysis Method:

EPA 5035 8015B

Units: mg/Kg

Basis: Wet

Level: Low

Result Q

**PQL** 0.084

Dilution Factor **MDL** 0.045

Date Extracted

Date Analyzed Extraction

Analyte Name Gasoline

ND U

10/23/04

10/23/04

Lot Note LWG0403834

Surrogate Name

%Rec

Control Limits

Date Analyzed

Note

Acceptable

Bromofluorobenzene

71

58-119

10/23/04

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SuperSet Reference:

RR7667

1 of 1 Page

Merged

**Analytical Results** 

Client: Project:

Sample Matrix:

PW Environmental Bauer & Collins

Soil

Service Request: L0402108

Date Collected: NA

Date Collected: NA
Date Received: NA

Gasoline Range Organics (GRO)

Sample Name: Lab Code: Method Blank LWG0403834-3

EPA 5035

Units: mg/Kg
Basis: Wet

Level: Low

Extraction Method: Analysis Method:

8015B

				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline	ND U	0.10	0.045	1	10/22/04	10/22/04	LWG0403834	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	90	58-119	10/22/04	Acceptable	

Comments:

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Merged

Form 1A - Organic

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SuperSet Reference: RR7667

Page 1 of 1

Analytical Results

Client: Project: PW Environmental Bauer & Collins

Sample Matrix:

Soil

Service Request: L0402108

Date Collected: NA Date Received: NA

Gasoline Range Organics (GRO)

Sample Name: Lab Code:

Method Blank LWG0403841-3

Extraction Method: Analysis Method:

EPA 5035 8015B

Units: mg/Kg

Basis: Wet

Level: Med

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline	ND U	5.0	2.3	1	10/22/04	10/22/04	LWG0403841	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	97	62-133	10/22/04	Acceptable

Comments:

17

Form 1A - Organic

SuperSet Reference: RR7667

1 of 1 Page

Printed: 10/27/2004 07:57:32 P:\STEALTH\CRYSTAL.RPT\Form1m.rpt

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QA/QC Report

Client:

PW Environmental

Project:

Bauer & Collins

Sample Matrix:

Soil

Service Request: L0402108

Surrogate Recovery Summary Gasoline Range Organics (GRO)

Extraction Method:

EPA 5035

Analysis Method:

8015B

Units: PERCENT

Level: Low

Sample Name	Lab Code	<u>Sur1</u>
BSCb1-2	L0402108-002	69
BSCb1-3	L0402108-003	71
Method Blank	LWG0403834-3	90
Lab Control Sample	LWG0403834-1	101
Duplicate Lab Control Sample	LWG0403834-2	100

Surrogate Recovery Control Limits (%)

Surl = Bromofluorobenzene

58-119

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

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Form 2A - Organic

SuperSet Reference: RR7667

Page 1 of 1

Printed: 10/27/2004 07:57:36 P:\STEALTH\CRYSTAL.RPT\Form2.rpt

QA/QC Report

Client:

PW Environmental

Project:

Bauer & Collins

Sample Matrix:

Soil

Service Request: L0402108

Surrogate Recovery Summary Gasoline Range Organics (GRO)

Extraction Method: Analysis Method:

EPA 5035

8015B

Units: PERCENT

Level: Med

Sample Name	Lab Code	<u>Sur1</u>
BSCb1-1	L0402108-001	643 D *
Method Blank	LWG0403841-3	97
Lab Control Sample	LWG0403841-1	106
Duplicate Lab Control Sample	LWG0403841-2	99

Surrogate Recovery Control Limits (%)

Surl = Bromofluorobenzene

62-133

Results flagged with an asterisk (\*) indicate values outside control criteria. Results flagged with a pound (#) indicate the control criteria is not applicable.

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Form 2A - Organic

Page

1 of 1

Printed: 10/27/2004 07:57:39 P:\STEALTH\CRYSTAL.RPT\Form2.rpt

SuperSet Reference:

RR7667

QA/QC Report

Client: Project: PW Environmental Bauer & Collins

Sample Matrix:

Soil

Service Request: L0402108 Date Extracted: 10/22/2004

Date Analyzed: 10/22/2004

Lab Control Spike/Duplicate Lab Control Spike Summary Gasoline Range Organics (GRO)

**Extraction Method:** Analysis Method:

**Analyte Name** 

Gasoline

EPA 5035 8015B

Units: mg/Kg Basis: Wet

Level: Low

Extraction Lot: LWG0403834

Lab Control Sample

Lab Control Spike

Expected

1.00

Result

0.945

LWG0403834-1

%Rec

94

Duplicate Lab Control Sample

LWG0403834-2

**Duplicate Lab Control Spike** 

**RPD** %Rec **RPD** Limits Result %Rec Limit Expected 0.935 1.00 93 76-117 20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Project: PW Environmental

Sample Matrix:

Bauer & Collins

Soil

Service Request: L0402108 Date Extracted: 10/22/2004 Date Analyzed: 10/23/2004

Lab Control Spike/Duplicate Lab Control Spike Summary Gasoline Range Organics (GRO)

Extraction Method: Analysis Method:

**Analyte Name** 

Gasoline

EPA 5035 8015B

Units: mg/Kg Basis: Wet

Level: Med

Extraction Lot: LWG0403841

Lab Control Sample LWG0403841-1 Lab Control Spike

**Expected** 

51.0

%Rec

91

Result

46.5

**Duplicate Lab Control Sample** LWG0403841-2

**Duplicate Lab Control Spike** 

Expected

51.0

Result

43.4

%Rec

85

%Rec RPD RPD Limits Limit 7 74-111 20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Form 3C - Organic

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Printed: 10/27/2004 07:57:45 P:\STEALTH\CRYSTAL.RPT\Form3DLC.rpt

SuperSet Reference: RR7667

## Analytical Report

Client:

PW Environmental

Project:

Bauer & Collins

Sample Matrix:

Soil

Service Request: L0402108

Date Collected: 10/13/04

Date Received: 10/14/04

Lead, Total

Prep Method:

**EPA 3050B** 

Analysis Method:

6020

Units: mg/Kg (ppm)

Basis: Wet

Test Notes:

Sample Name	Lab Code	PQL	MDL	Dilution Factor	Date Digested	Date Analyzed	Result	Result Notes
BSCb1-1	L0402108-001	0.4	0.04	1	10/18/04	10/19/04	17	
BSCb1-2	L0402108-002	0.4	0.04	1	10/18/04	10/19/04	7.2	
BSCb1-3	L0402108-003	0.4	0.04	1	10/18/04	10/19/04	7.5	
Method Blank	L041018-MB3	0.4	0.04	1	10/18/04	10/19/04	ND	

Approved By: \_\_\_

1A/020597p

Date: 10/28/04

QA/QC Report

Client: Project:

PW Environmental Bauer & Collins

Sample Matrix:

Soil

Service Request: L0402108

Date Collected: NA
Date Received: NA
Date Digested: 10/18/04

Date Analyzed: 10/19/04

Matrix Spike/Duplicate Matrix Spike Summary

Lead, Total

Sample Name:

Batch QC

L0402087-005MS,

L0402087-005DMS

Units: mg/Kg (ppm)

Basis: Wet

Lab Code: Test Notes:

Percent Recovery

	Dwan	Analysis		Spiles	Laval	Sample	Snika	Dacult			CAS	Relative Percent	Docult
Analyte	Prep Method	Method	PQL	MS	DMS	Result	MS	DMS	MS	DMS	Acceptance Limits	Difference	
Lead, Total	EPA 3050B	6020	0.4	100	100	ND	101	101	101	101	70-130	<1	

02108ICP.BS1 - DMS 10/28/04

QA/QC Report

Client:

PW Environmental

Project:

Bauer & Collins

LCS Matrix:

Soil

Service Request: L0402108

Date Collected: NA

Date Received: NA

Date Digested: 10/18/04 Date Analyzed: 10/19/04

Laboratory Control Sample Summary

Lead, Total

Sample Name:

Lab Control Sample L041018-LCS

Units: mg/Kg (ppm)

Basis: NA

Result

Notes

Lab Code:

Test Notes:

Analyte

**CAS** Percent Recovery Prep Analysis True Percent Acceptance Method Method Value Limits Result Recovery

Lead, Total EPA 3050B 6020 100 98.3 98 70-130

Approved By: \_

02108ICP.BS1 - LCS 10/28/04

LCS/020597p

Date: 10/28/04

24

ETVIFORMETTEL (0402/08 CHAIN OF CUSTODY RECORD (805) 656-4677 - (805) 525-5563 - FAX (805) 525-2896

4

	(805) 656-4677 • (805) 525-5563 • FAX (805) 525-2896	3 • FAX (805) 525-2896		Lab:		'	ANALYSIS		REQUESTED		
	PROJECT NAME: FOLIE & PAILLS		ERS				1242/				αι
	PROJECT ADDRESS: 1140 S. Wells 2	. Zd.	NIAT			10758	0209/			[E01-0	SHK 2
		,				EDC 8		8510		) I to que	o uk \
	PROJECT MANAGER: _   . Watson		OE	N	N skel 80 l	δίχΟ/Λ	9vlozzi <b>C</b>	17 PP13		AYG/E	J-⊢K 41
	SAMPLER SIGNATURE: TOUR (1) 1 5mg	P.O. # 1286-	NBER	IS 108	15108 108 FG	OXY)		139M/K		191 EV/N	PID Reading,
(	SAMPLE LO	DATE	NUN	G-H9T	O-H9T	EULL FULL	TCLP	FLUSUC		III ded	Odor, Staining. Other TAT, etc.
	North Wall / Cut #2   5'	10/13/04 11:12 50:11	4	XX		X					92pm
	18	17:11	t	X		XX					.2ppm
<u>ක</u> )	30 Hm / 560 + #2 8'	()	4	<b>&gt;</b> <		XΙX					neelg.
<u>.                                      </u>											
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	RELINOUISHED BY: (Signature)	RECEIVED BY:	ta	14.6/4			DATE	PATE 91464	,	TIME	0,
_	RELINOUISHED BY (Signature) With World	RECEIVED BY: (signature)		MA	0	1	DATE	DATE 10/14	lad	TIME 7	A
	11	Required MRLS to	S.B. CO	Los Angeles	eles ·	Lahontan	Central		San Bernardino County	KCEHD Kern	OCHCA
	A Fax preliminary data ASAP				ا ا	a Com	RWOCB		G	County	County

# SAMPLE RECEIPT FORM

Service Request No: L040 2108 Client: PW EN
Sample(s) delivered by: Client CAS Emp After Hours DHL
Golden State Overnight Fed X UPS Other Courier
Chain of Custody filled out accurately? Yes No(See Comments)
Appropriate sample volume and containers? Yes/ No(See Comments)
Sufficient labeling on container(s)?  Yes No (See Comments)
Container(s) supplied by CAS?  Yes No(See Comments)
Custody seal(s) intact? N/A / Yes No(See Comments)
Trip Blank(s) received Yes No
If Trip Blank was supplied by CAS, record serial #TB
Temperature of sample(s)/cooler °C Temp Blank? Y or N (Circle One)
Voa's Marked Preserved? Yes No Filled Properly? Yes No (See Comments
Preserved Bottles Requiring pH check(s)? Yes Appropriate Preservation? Yes No
RUSH Turn around time? Yes Notified Date & Time
Short Hold-Time Analysis (check all that apply)
ASAP         Res Cl         D.O         Flash         Diss S2         Ferrous Fe           24HR         pH         Odor         Cr+6         Nitrate         Nitrate         Nitrate         72HR         Vapors         Vapors         Turbidity
Notified Date & Time
Container(s) received and their preservative(s):
-1 -> -3 = 1-402 Jar 6-ENCORES
Comments NO TAT UN CHAIN, ENCORES TRANSPERREDO TO PRESENCE UPON RETERPT IN LAB
26
Initials, Date, Time LC 10/14/1825. r:\sr_forms\cooler.doc Rev. 2/25/02



October 27, 2004

Robert Orlando PW Environmental 230 Dove Court Santa Paula, CA 93060

RE: Bauer & Collins Rem. EXC

Dear Robert:

Enclosed are the results of the samples submitted to our laboratory on October 15, 2004. For your reference, these analyses have been assigned our service request number L0402116.

All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed. Columbia Analytical Services is not responsible for use of less than the complete report. Your report contains 29 pages.

Columbia Analytical Services is certified for environmental analyses by the California Department of Health Services (certificate number: 1296A); NELAP (certificate number: 02115CA); Los Angeles County Laboratory ID (No. 10151); and Arizona Department of Health Services (License number: AZ0136 and AZ0544).

If you have any questions, please call me at (818) 587-5550, extension 310.

Respectfully submitted,

Columbia Analytical Services, Inc.

Stuart Sigman

**Project Chemist** 

SS/sa

Client:

PW Environmental

Service Request No.: L0402116

Project:

Bauer & Collins Rem. EXC

Date Received:

10/15/04

Sample Matrix:

#### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS).

#### Sample Receipt

The samples were received for analysis at Columbia Analytical Services on 10/15/04. No discrepancies were noted upon initial sample inspection. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored at 4°C or frozen at -20°C upon receipt at the laboratory.

#### Volatile Organic Compounds by EPA Method 8260B

The control criteria were exceeded for the following surrogates in sample BEX2-1 due to matrix interferences: Toluene-d8 and 4-Bromofluorobenzene. A reanalysis was performed, but produced similar results. The results of the original analysis are reported. No further corrective action was required.

The upper control criterion was exceeded for the following analytes in Laboratory Control Samples (LCS and DLCS) of Extraction Lot: LWG0403763 and LWG0403796: Methyl tert-Butyl Ether, tert-Butyl Alcohol, tert-Butyl Ethyl Ether and tert-Amyl Methyl Ether. The analytes in question were not detected in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

#### Gasoline Range Organics by EPA Method 8015M

Sample BEX2-1 was analyzed as medium level soil due to the presence of elevated levels of target analyte. The reporting limits are adjusted to reflect the dilution.

The control criterion was exceeded for the Bromofluorobenzene surrogates in samples BEX2-1 and BEX2-2 due to matrix interferences. Due to the presence of background components that prevented adequate resolution of the surrogate, accurate quantitation was not possible. No further corrective action was appropriate.

#### **Total Metals**

Batch QC was run along with these samples. These results are provided for information purposes only. The Method Blank and Laboratory Control Sample were within control criteria. No anomalies were encountered during this analysis.

Approved by	550	Date_	10/27/04
			<del></del>

# Columbia Analytical Services, Inc.

	Columbia Analytical Scivices, in
	Acronyms
8015M	California DHS LUFT Method
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene/Toluene/Ethylbenzene/Xylenes
CAM	California Assessment Metals
CAS Number	Chemical Abstract Service Registry Number
CFC	Chlorofluorocarbon
COD	Chemical Oxygen Demand
CRDL	Contract Required Detection Limit
D	Detected; result must be greater than zero.
DL	Detected; result must be greater than the detection limit.
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOH or DHS ELAP	Department of Health Services
EPA	Environmental Laboratory Accreditation Program U.S. Environmental Protection Agency
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MDL	Method Detection Limit
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert - Butyl Ether
NA NC	Not Applicable Not Calculated
ND	None Detected at or above the Method Reporting/Detection Limit (MRL/MDL)
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater 18th Ed., 1992.
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical MethodsSW-846,
mar n	Third Edition, 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristics Leaching Procedure
TDS	Total Dissolved Solids
TPH TRPH	Total Percurable Petroleum Hydrogarbons
TSS	Total Recoverable Petroleum Hydrocarbons Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)
	Qualifiers
U	Undetected at or above MDL/MRL (PQL).
J	Estimated concentration. Analyte detected above MDL but below MRL (PQL).
В	Hit above MRL (PQL) also found in Method Blank.
E	Analyte concentration above high point of ICAL.

U	Undetected at or above MDL/MRL (PQL).
J	Estimated concentration. Analyte detected above MDL but below MRL (PQL).
В	Hit above MRL (PQL) also found in Method Blank.
E	Analyte concentration above high point of ICAL.
D	Result from dilution.
X	See case narrative.

Client: Project: PW Environmental

Bauer & Collins Rem. EXC

Service Request:

L0402116

Cover Page - Organic Analysis Data Package Volatile Organic Compounds

		Date	Date
Sample Name	Lab Code	Collected	Received
BEX2-1	L0402116-001	10/15/2004	10/15/2004
BEX2-2	L0402116-002	10/15/2004	10/15/2004
BEX2-3	L0402116-003	10/15/2004	10/15/2004
BFX2-4	1.0402116-004	10/15/2004	10/15/2004

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Date: 10/27/04

Name: Stuart Sigman

Title: Project Chemist

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Cover Page - Organic

Page 1 of

Analytical Results

Client: Project:

PW Environmental

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Service Request: L0402116

**Date Collected:** 10/15/2004

Date Received: 10/15/2004

# Volatile Organic Compounds

Sample Name:

BEX2-1

Lab Code:

L0402116-001

Extraction Method:

EPA 5035

Analysis Method:

8260B

Units: ug/Kg Basis: Wet

Level: Low

Analyte Name	Result	Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	4.1	1.1	1	10/18/04	10/18/04	LWG0403763	
Toluene	ND	U	4.1	1.2	1	10/18/04	10/18/04	LWG0403763	
Ethylbenzene	23		4.1	1.2	1	10/18/04	10/18/04	LWG0403763	
Total Xylenes	ND	ับ	12	3.9	1	10/18/04	10/18/04	LWG0403763	
Methyl tert-Butyl Ether	ND	U	8.2	2.5	1	10/18/04	10/18/04	LWG0403763	
tert-Butyl Alcohol	ND	U	41	23	1	10/18/04	10/18/04	LWG0403763	
Diisopropyl Ether	ND	U	8.2	2.1	1	10/18/04	10/18/04	LWG0403763	
tert-Butyl Ethyl Ether	ND	U	8.2	2.1	1	10/18/04	10/18/04	LWG0403763	
tert-Amyl Methyl Ether	ND	U	8.2	2.3	1	10/18/04	10/18/04	LWG0403763	
1,2-Dibromoethane (EDB)	ND	U	4.1	1.1	1	10/18/04	10/18/04	LWG0403763	
1,2-Dichloroethane (EDC)	ND	U	4.1	1.1	1	10/18/04	10/18/04	LWG0403763	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Dibromofluoromethane	98	62-136	10/18/04	Acceptable	
Toluene-d8	132	67-131	10/18/04	Outside Control Limits	
4-Bromofluorobenzene	165	64-130	10/18/04	Outside Control Limits	

Comments:

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Analytical Results

Client: Project: PW Environmental

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Service Request: L0402116

Date Collected: 10/15/2004

**Date Received:** 10/15/2004

# **Volatile Organic Compounds**

Sample Name:

BEX2-2

Lab Code:

L0402116-002

Extraction Method: Analysis Method:

EPA 5035 8260B Units: ug/Kg
Basis: Wet

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Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	4.6	1.1	1	10/18/04	10/18/04	LWG0403763	
Toluene	ND U	4.6	1.2	1	10/18/04	10/18/04	LWG0403763	
Ethylbenzene	ND U	4.6	1.2	1	10/18/04	10/18/04	LWG0403763	
Total Xylenes	ND U	14	3.9	1	10/18/04	10/18/04	LWG0403763	
Methyl tert-Butyl Ether	ND U	9.1	2.5	1	10/18/04	10/18/04	LWG0403763	
tert-Butyl Alcohol	ND U	46	23	1	10/18/04	10/18/04	LWG0403763	
Diisopropyl Ether	ND U	9.1	2.1	. 1	10/18/04	10/18/04	LWG0403763	
tert-Butyl Ethyl Ether	ND U	9.1	2.1	1	10/18/04	10/18/04	LWG0403763	
tert-Amyl Methyl Ether	ND U	9.1	2.3	1	10/18/04	10/18/04	LWG0403763	
1,2-Dibromoethane (EDB)	ND U	4.6	1.1	1	10/18/04	10/18/04	LWG0403763	
1,2-Dichloroethane (EDC)	ND U	4.6	1.1	1	10/18/04	10/18/04	LWG0403763	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	98	62-136	10/18/04	Acceptable
Toluene-d8	108	67-131	10/18/04	Acceptable
4-Bromofluorobenzene	99	64-130	10/18/04	Acceptable

Comments:

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**Analytical Results** 

Client: Project: PW Environmental

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Service Request: L0402116 Date Collected: 10/15/2004

**Date Received:** 10/15/2004

# **Volatile Organic Compounds**

Sample Name:

BEX2-3

Lab Code:

L0402116-003

Extraction Method: EPA 5035

Units: ug/Kg

Basis: Wet

Analysis Method:

8260B

Level: Low

•	Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
	Benzene	ND U	4.3	1.1	1	10/18/04	10/18/04	LWG0403763	
	Toluene	ND U	4.3	1.2	1	10/18/04	10/18/04	LWG0403763	
	Ethylbenzene	ND U	4.3	1.2	1	10/18/04	10/18/04	LWG0403763	
	Total Xylenes	ND U	13	3.9	1	10/18/04	10/18/04	LWG0403763	
	Methyl tert-Butyl Ether	ND U	8.5	2.5	1	10/18/04	10/18/04	LWG0403763	
	tert-Butyl Alcohol	ND U	43	23	1	10/18/04	10/18/04	LWG0403763	
	Diisopropyl Ether	ND U	8.5	2.1	1	10/18/04	10/18/04	LWG0403763	
۲	tert-Butyl Ethyl Ether	ND U	8.5	2.1	1	10/18/04	10/18/04	LWG0403763	
	tert-Amyl Methyl Ether	ND U	8.5	2.3	1	10/18/04	10/18/04	LWG0403763	
	1,2-Dibromoethane (EDB)	ND U	4.3	1.1	1	10/18/04	10/18/04	LWG0403763	
	1,2-Dichloroethane (EDC)	ND U	4.3	1.1	1	10/18/04	10/18/04	LWG0403763	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Dibromofluoromethane	95	62-136	10/18/04	Acceptable	
Toluene-d8	100	67-131	10/18/04	Acceptable	
4-Bromofluorobenzene	93	64-130	10/18/04	Acceptable	

Analytical Results

Client: Project: PW Environmental

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Service Request: L0402116

**Date Collected:** 10/15/2004

**Date Received:** 10/15/2004

# Volatile Organic Compounds

Sample Name:

BEX2-4

Lab Code:

L0402116-004

Extraction Method: Analysis Method:

EPA 5035 8260B

Units: ug/Kg Basis: Wet

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	4.2	1.1	1	10/19/04	10/19/04	LWG0403796	
Toluene	ND U	4.2	1.2	1	10/19/04	10/19/04	LWG0403796	
Ethylbenzene	ND U	4.2	1.2	1	10/19/04	10/19/04	LWG0403796	
Total Xylenes	ND U	13	3.9	1	10/19/04	10/19/04	LWG0403796	
Methyl tert-Butyl Ether	ND U	8.4	2.5	1	10/19/04	10/19/04	LWG0403796	
tert-Butyl Alcohol	ND U	42	23	1	10/19/04	10/19/04	LWG0403796	
Diisopropyl Ether	ND U	8.4	2.1	1	10/19/04	10/19/04	LWG0403796	
tert-Butyl Ethyl Ether	ND U	8.4	2.1	1	10/19/04	10/19/04	LWG0403796	
tert-Amyl Methyl Ether	ND U	8.4	2.3	1	10/19/04	10/19/04	LWG0403796	
1,2-Dibromoethane (EDB)	ND U	4.2	1.1	1	10/19/04	10/19/04	LWG0403796	
1,2-Dichloroethane (EDC)	ND U	4.2	1.1	1	10/19/04	10/19/04	LWG0403796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	103	62-136	10/19/04	Acceptable
Toluene-d8	103	67-131	10/19/04	Acceptable
4-Bromofluorobenzene	98	64-130	10/19/04	Acceptable

**Analytical Results** 

Client: Project: PW Environmental

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Service Request: L0402116

Date Collected: NA Date Received: NA

# **Volatile Organic Compounds**

Sample Name:

Method Blank

Lab Code:

LWG0403763-3

Extraction Method: EPA 5035

Units: ug/Kg Basis: Wet

Level: Low

alysis Method:	8260B

Analyte Name	Result	Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	5.0	1.1	1	10/18/04	10/18/04	LWG0403763	
Toluene	ND	U	5.0	1.2	1	10/18/04	10/18/04	LWG0403763	
Ethylbenzene	ND	U	5.0	1.2	1	10/18/04	10/18/04	LWG0403763	
Total Xylenes	ND	Ü	15	3.9	1	10/18/04	10/18/04	LWG0403763	
Methyl tert-Butyl Ether	ND	U	10	2.5	1	10/18/04	10/18/04	LWG0403763	
tert-Butyl Alcohol	ND	U	50	23	1	10/18/04	10/18/04	LWG0403763	
Diisopropyl Ether	ND	U	10	2.1	1	10/18/04	10/18/04	LWG0403763	
tert-Butyl Ethyl Ether	ND	U	10	2.1	1	10/18/04	10/18/04	LWG0403763	
tert-Amyl Methyl Ether	ND	U	10	2.3	1	10/18/04	10/18/04	LWG0403763	
1,2-Dibromoethane (EDB)	ND	U	5.0	1.1	1	10/18/04	10/18/04	LWG0403763	
1,2-Dichloroethane (EDC)	ND	U	5.0	1.1	1	10/18/04	10/18/04	LWG0403763	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Dibromofluoromethane	104	62-136	10/18/04	Acceptable	
Toluene-d8	103	67-131	10/18/04	Acceptable	
4-Bromofluorobenzene	98	64-130	10/18/04	Acceptable	

Analytical Results

Client:

PW Environmental

Project:

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Service Request: L0402116

Date Collected: NA Date Received: NA

#### **Volatile Organic Compounds**

Sample Name:

Method Blank

Lab Code:

LWG0403796-3

**Extraction Method:** 

EPA 5035

Analysis Method:

8260B

Units: ug/Kg Basis: Wet

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	5.0	1.1	1	10/19/04	10/19/04	LWG0403796	
Toluene	ND U	5.0	1.2	1	10/19/04	10/19/04	LWG0403796	
Ethylbenzene	ND U	5.0	1.2	1	10/19/04	10/19/04	LWG0403796	
Total Xylenes	ND U	15	3.9	1	10/19/04	10/19/04	LWG0403796	
Methyl tert-Butyl Ether	ND U	10	2.5	1	10/19/04	10/19/04	LWG0403796	
tert-Butyl Alcohol	ND U	50	23	1	10/19/04	10/19/04	LWG0403796	
Diisopropyl Ether	ND U	10	2.1	1	10/19/04	10/19/04	LWG0403796	
tert-Butyl Ethyl Ether	ND U	10	2.1	1	10/19/04	10/19/04	LWG0403796	
tert-Amyl Methyl Ether	ND U	10	2.3	1	10/19/04	10/19/04	LWG0403796	
1,2-Dibromoethane (EDB)	ND U	5.0	1.1	1	10/19/04	10/19/04	LWG0403796	
1,2-Dichloroethane (EDC)	ND U	5.0	1.1	1	10/19/04	10/19/04	LWG0403796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	82	62-136	10/19/04	Acceptable
Toluene-d8	95	67-131	10/19/04	Acceptable
4-Bromofluorobenzene	92	64-130	10/19/04	Acceptable

QA/QC Report

Client:

PW Environmental

Project:

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Service Request: L0402116

Surrogate Recovery Summary Volatile Organic Compounds

Extraction Method:

EPA 5035

Analysis Method:

8260B

Units: PERCENT

Level: Low

Sample Name	Lab Code	<u>Sur1</u>	Sur2	Sur3
BEX2-1	L0402116-001	98	132 *	165 *
BEX2-2	L0402116-002	98	108	99
BEX2-3	L0402116-003	95	100	93
BEX2-4	L0402116-004	103	103	98
Method Blank	LWG0403763-3	104	103	98
Method Blank	LWG0403796-3	82	95	92
Lab Control Sample	LWG0403763-1	106	103	101
Duplicate Lab Control Sample	LWG0403763-2	104	101	98
Lab Control Sample	LWG0403796-1	103	99	93
Duplicate Lab Control Sample	LWG0403796-2	99	102	94

# Surrogate Recovery Control Limits (%)

Surl =	Dibromofluoromethane	62-136
Sur2 =	Toluene-d8	67-131
Sur3 =	4-Bromofluorobenzene	64-130

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Project: PW Environmental

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Date Extracted: 10/18/2004

Service Request: L0402116

**Date Analyzed:** 10/18/2004

# Lab Control Spike/Duplicate Lab Control Spike Summary Volatile Organic Compounds

Extraction Method:

EPA 5035

Units: ug/Kg

Basis: Wet

Extraction Lot: LWG0403763

Level: Low

Analysis Method: 8260B

Lab Control Sample

Duplicate Lab Control Sample

	<del>-</del> · ·	/G0403763-1 Control Spik			/G0403763-2 e Lab Control		%Rec		RPD
Analyte Name	Result	Expected	%Rec	Result	Expected	%Rec	Limits	RPD	Limit
Benzene	21.1	20.0	105	18.9	20.0	95	64-125	11	30
Toluene	21.4	20.0	107	19.0	20.0	95	69-119	12	30
Ethylbenzene	22.2	20.0	111	19.5	20.0	98	68-120	13	30
Total Xylenes	66.6	60.0	111	57.7	60.0	96	65-121	14	30
Methyl tert-Butyl Ether	60.7	40.0	152 *	55.7	40.0	139 *	64-131	9	30
tert-Butyl Alcohol	456	400	114	397	400	99	60-128	14	30
Diisopropyl Ether	48.9	40.0	122	43.0	40.0	107	70-124	13	30
tert-Butyl Ethyl Ether	55.7	40.0	139 *	51.5	40.0	129 *	70-126	8	30
tert-Amyl Methyl Ether	52.0	40.0	130 *	47.9	40.0	120	74-122	8	30
1,2-Dibromoethane (EDB)	20.6	20.0	103	19.0	20.0	95	74-118	8	30
1.2-Dichloroethane (EDC)	19.9	. 20.0	99	18.1	20.0	91	65-128	9	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Project: PW Environmental

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Service Request: L0402116 Date Extracted: 10/19/2004

**Date Analyzed:** 10/19/2004

## Lab Control Spike/Duplicate Lab Control Spike Summary Volatile Organic Compounds

Extraction Method:

EPA 5035

Units: ug/Kg Basis: Wet

Level: Low

Extraction Lot: LWG0403796

Analysis Method:

8260B

Lab Control Sample LWG0403796-1

**Duplicate Lab Control Sample** LWG0403796-2

	Lab	Control Spik	e	Duplicat	e Lab Control	Spike	%Rec		RPD
Analyte Name	Result	Expected	%Rec	Result	Expected	%Rec	Limits	RPD	Limit
Benzene	20.0	20.0	100	18.3	20.0	92	64-125	9	30
Toluene	20.8	20.0	104	19.5	20.0	98	69-119	6	30
Ethylbenzene	21.1	20.0	106	19.4	20.0	97	68-120	9	30
Total Xylenes	63.7	60.0	106	57.8	60.0	96	65-121	10	30
Methyl tert-Butyl Ether	58.9	40.0	147 *	. 55.8	40.0	139 *	64-131	5	30
tert-Butyl Alcohol	529	400	132 *	419	400	105	60-128	23	30
Diisopropyl Ether	42.2	40.0	106	39.5	40.0	99	70-124	7	30
tert-Butyl Ethyl Ether	52.4	40.0	131 *	49.3	40.0	123	70-126	6	30
tert-Amyl Methyl Ether	49.5	40.0	124 *	46.8	40.0	117	74-122	6	30
1,2-Dibromoethane (EDB)	21.1	20.0	106	20.2	20.0	101	74-118	5	30
1,2-Dichloroethane (EDC)	20.0	, 20.0	100	18.4	20.0	92	65-128	8	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Project: PW Environmental

Bauer & Collins Rem. EXC

**Service Request:** 

L0402116

Cover Page - Organic Analysis Data Package Gasoline Range Organics (GRO)

		Date	Date
Sample Name	Lab Code	Collected	Received
BEX2-1	L0402116-001	10/15/2004	10/15/2004
BEX2-2	L0402116-002	10/15/2004	10/15/2004
BEX2-3	L0402116-003	10/15/2004	10/15/2004
BEX2-4	L0402116-004	10/15/2004	10/15/2004

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

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Name: Shart Sigman

Title: Project Chemust

Cover Page - Organic

Page 1 of

RR7672

**Analytical Results** 

Client:

PW Environmental

Project:

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Service Request: L0402116

**Date Collected:** 10/15/2004

Date Received: 10/15/2004

# Gasoline Range Organics (GRO)

Sample Name:

BEX2-1

Lab Code:

L0402116-001

Units: mg/Kg Basis: Wet

**Extraction Method:** 

EPA 5035

Analysis Method:

Level: Med

8015B

Dilution Date Date Extraction

**Analyte Name Factor** Result Q **PQL MDL** Extracted Analyzed Lot Note Gasoline **330** D 8.8 4.6 2 10/22/04 10/23/04 LWG0403841

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	625	62-133	10/23/04	Outside Control Limits

Comments:

15

1 of 1

Analytical Results

Client: Project: PW Environmental

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Service Request: L0402116

Date Collected: 10/15/2004

Date Received: 10/15/2004

Gasoline Range Organics (GRO)

Sample Name:

BEX2-2

Lab Code:

L0402116-002

Units: mg/Kg Basis: Wet

Extraction Method:

EPA 5035

Analysis Method:

8015B

Level: Low

				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline	1.3	0.087	0.045	1	10/23/04	10/23/04	LWG0403834	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	497	58-119	10/23/04	Outside Control Limits

Comments:

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**Analytical Results** 

Client: Project: PW Environmental

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Service Request: L0402116

Date Collected: 10/15/2004

**Date Received:** 10/15/2004

# Gasoline Range Organics (GRO)

Sample Name:

BEX2-3

Lab Code:

L0402116-003

Extraction Method: Analysis Method:

EPA 5035

8015B

Units: mg/Kg

Basis: Wet

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline	0.091	0.084	0.045	1	10/23/04	10/23/04	LWG0403834	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	77	58-119	10/23/04	Acceptable	

Comments:

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RR7672

SuperSet Reference:

Page

1 of 1

Analytical Results

Client:

PW Environmental

Project:

Bauer & Collins Rem. EXC

Sample Matrix: Soil

Service Request: L0402116 Date Collected: 10/15/2004

Date Received: 10/15/2004

Gasoline Range Organics (GRO)

Sample Name:

BEX2-4

Lab Code:

**Extraction Method:** 

**Analysis Method:** 

L0402116-004

Basis: Wet

Level: Low

Units: mg/Kg

8015B

EPA 5035

Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Date Analyzed	Extraction Lot	Note
Gasoline	ND U	0.093	0.045	1	10/23/04	10/23/04	LWG0403834	

Dil.....

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	73	58-119	10/23/04	Acceptable	

Comments:

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SuperSet Reference: RR7672

Page 1 of 1

Analytical Results

Client: Project: PW Environmental

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Service Request: L0402116

Date Collected: NA

Date Received: NA

Gasoline Range Organics (GRO)

Sample Name: Lab Code:

Method Blank

LWG0403834-3

Extraction Method: Analysis Method:

EPA 5035

8015B

Units: mg/Kg

Basis: Wet

Level: Low

**Dilution** Date Date Extraction **PQL Factor** Extracted Analyzed Lot Note **MDL** Analyte Name Result Q 10/22/04 LWG0403834 Gasoline ND U 0.10 0.045 10/22/04

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	90	58-119	10/22/04	Acceptable	

Comments:

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SuperSet Reference: RR7672

1 of 1 Page

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**Analytical Results** 

Client:

PW Environmental

Project:

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Service Request: L0402116

Date Collected: NA Date Received: NA

Gasoline Range Organics (GRO)

Sample Name:

Method Blank

Lab Code:

LWG0403841-3

Extraction Method:

EPA 5035

Units: mg/Kg

Basis: Wet

Level: Med

Analysis Method:

8015B

Dilution Date Date Extraction Result Q

Analyte Name Gasoline

ND U

**PQL** 5.0

**MDL** 2.3

**Factor** Extracted 10/22/04 1

Analyzed 10/22/04

Note Lot

LWG0403841

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	97	62-133	10/22/04	Acceptable	

Comments:

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Merged

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Page

1 of

SuperSet Reference: RR7672

QA/QC Report

Client:

PW Environmental

Project:

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Service Request: L0402116

**Surrogate Recovery Summary** Gasoline Range Organics (GRO)

Extraction Method: EPA 5035 Analysis Method:

8015B

Units: PERCENT

Level: Low

Sample Name	<u>Lab Code</u>	Sur1		
BEX2-2	L0402116-002	497	*	
BEX2-3	L0402116-003	77		
BEX2-4	L0402116-004	73		
Method Blank	LWG0403834-3	90		
Lab Control Sample	LWG0403834-1	101		
Dunlicate Lab Control Sample	LWG0403834-2	100		

Surrogate Recovery Control Limits (%)

Sur1 = Bromofluorobenzene

58-119

Results flagged with an asterisk (\*) indicate values outside control criteria. Results flagged with a pound (#) indicate the control criteria is not applicable.

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Form 2A - Organic

Page 1 of 1

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SuperSet Reference: RR7672

QA/QC Report

Client:

PW Environmental

Project:

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Surrogate Recovery Summary Gasoline Range Organics (GRO)

Extraction Method:

EPA 5035

Analysis Method:

8015B

[[mitos

Service Request: L0402116

Units: PERCENT

Level: Med

Lab Code	Sur1
L0402116-001	625 D *
LWG0403841-3	97
LWG0403841-1	106
LWG0403841-2	99
	L0402116-001 LWG0403841-3 LWG0403841-1

Surrogate Recovery Control Limits (%)

Surl = Bromofluorobenzene

62-133

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

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Form 2A - Organic

Page

1 of

SuperSet Reference: RR7672

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QA/QC Report

Client: Project: PW Environmental

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Service Request: L0402116 Date Extracted: 10/22/2004

Date Analyzed: 10/22/2004

Lab Control Spike/Duplicate Lab Control Spike Summary Gasoline Range Organics (GRO)

Extraction Method:

EPA 5035

Units: mg/Kg

Basis: Wet

Level: Low

Extraction Lot: LWG0403834

Analysis Method: 8015B

> Lab Control Sample LWG0403834-1

**Duplicate Lab Control Sample** 

LWG0403834-2

**Duplicate Lab Control Spike** Lab Control Spike %Rec **RPD** RPD Limits Limit Analyte Name Result Expected %Rec Result Expected %Rec 0.945 94 0.935 1.00 93 20 Gasoline 1.00 76-117

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Project: PW Environmental

Bauer & Collins Rem. EXC

Result

46.5

Sample Matrix:

Soil

Service Request: L0402116 Date Extracted: 10/22/2004

**Date Analyzed:** 10/23/2004

Lab Control Spike/Duplicate Lab Control Spike Summary Gasoline Range Organics (GRO)

Extraction Method: EPA 5035 Analysis Method:

Analyte Name

Gasoline

8015B

Units: mg/Kg Basis: Wet

Level: Med

Extraction Lot: LWG0403841

Lab Control Sample LWG0403841-1

Duplicate Lab Control Sample

LWG0403841-2 **Duplicate Lab Control Spike** 

Lab Control Spike **RPD** %Rec **RPD** Limit Limits %Rec %Rec Result Expected Expected 51.0 91 43.4 51.0 85 74-111 7 20

Results flagged with an asterisk (\*) indicate values outside control criteria.

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

#### Analytical Report

Client:

PW Environmental

Project:

Bauer & Collins Rem. EXC

Sample Matrix:

Service Request: L0402116

Date Collected: 10/15/04

Date Received: 10/15/04

Lead, Total

Prep Method:

Test Notes:

**EPA 3050B** 

Analysis Method:

6020

Units: mg/Kg (ppm) Basis: Wet

Sample Name	Lab Code	PQL	MDL	Dilution Factor	Date Digested	Date Analyzed	Result	Result Notes
BEX2-1	L0402116-001	0.4	0.04	1	10/18/04	10/19/04	15	
BEX2-2	L0402116-002	0.4	0.04	1	10/18/04	10/19/04	11	
BEX2-3	L0402116-003	0.4	0.04	1	10/18/04	10/19/04	9.1	
BEX2-4	L0402116-004	0.4	0.04	1	10/18/04	10/19/04	7.8	
Method Blank	L041018-MB3	0.4	0.04	1	10/18/04	10/19/04	ND	

Approved By:

1A/020597p

Date: 10/27/04

QA/QC Report

Client:

PW Environmental

Project:

Bauer & Collins Rem. EXC

Sample Matrix:

Soil

Service Request: L0402116

Date Collected: NA Date Received: NA

Date Digested: 10/18/04

Date Analyzed: 10/19/04

Matrix Spike/Duplicate Matrix Spike Summary

Lead, Total

Sample Name:

Batch QC

L0402087-005MS,

L0402087-005DMS

Units: mg/Kg (ppm)

Basis: Wet

Lab Code: Test Notes:

Percent Recovery

Analyte	Prep Method	Analysis Method	PQL	•		Sample Result	Spike I	Result DMS	MS	DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Lead, Total	EPA 3050B	6020	0.4	100	100	ND	101	101	101	101	70-130	<1	

Approved By: DMS/020597p

02116ICP.BS1 - DMS 10/27/04

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IMETCLTS.XLT

QA/QC Report

Client:

PW Environmental

Project:

Bauer & Collins Rem. EXC

LCS Matrix:

Soil

Service Request: L0402116

Date Collected: NA
Date Received: NA

Date Digested: 10/18/04

Date Analyzed: 10/19/04

Laboratory Control Sample Summary

Lead, Total

Sample Name:

Lab Control Sample

Lab Code:

L041018-LCS

Units: mg/Kg (ppm)

Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Lead, Total	EPA 3050B	6020	100	98.3	98	70-130	

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# ENVIRONMENTAL LOUGANG

230 DOVE COURT - SANTA PAULA - CALIFORNIA - 93060

CHAIN OF CUSTODY RECORD

Odor, Staining, Other TAT, etc. PID Reading, Orange County SCHO 030 24-HR 48 HR 72HR 5TD 13/ RUSH :1A1 KCEHD County Lab Filter Kern TPHG/BTEX/MTBE (Carb 410-T03) TIME TIME TPHG/BTEX/OXYG/EOH 8260B San Bernardino ANALYSIS REQUESTED County DATE 10/15/10x DATE 10/15/py Ð Ethanol 8260B Ethanol/Methanol 8015B **RWOCB** Central Coast TCLP 12+1/0209/0109 STLC Total \Dissolved pea-VOCs w/Oxygenates Lahontan **RWOCB** בחוד 8560B EDC ,8Q3 OXYG ВТЕХ, 8015M FC rpH-Char, M2108 O-H91 NPH-D Low Level 8015M Los Angeles **RWOCB** 5 M2108 O-Haj W5108 Lab: None Ice (Du) S.B. CO PSD-LUFT **NUMBER OF CONTAINERS** SAMPLE MATRIX Required MRLs to: جَي 50, P.O. # 8754 3 Ŕ (805) 656-4677 • (805) 525-5563 • FAX (805) 525-2896 RECEIVED BY: VCLUFT RECEIVED BY: (signature) 'signature) 9:45 10:04 45.60 TIME Sauch & Malins - Rem Ex 40F1/01 DATE 5. Wells Road USTCF EDF-COELT O NONE DEPTH es, 5 5 Method of shipment, additional comments: BEX2-3 Northern sidewal SAMPLE LOCATION Southensideusal SAMPLER SIGNATURE: MANA BEX2-2 leasten sidewal Botton Fax preliminary data ASAP PROJECT MANAGER: \ PROJECT ADDRESS: PROJECT NAME: RELINQUISHED BY: RELINQUISHED BY: FEB-4 BEX2-1 SAMPLE 'signature) signature)

# SAMPLE RECEIPT FORM

Service Request No: L0402116 Client: PWB
Sample(s) delivered by: Client CAS Emp After Hours DHL
Golden State Overnight Fed X UPS Other Courier
Chain of Custody filled out accurately? Yes \( \sum_\) No(See Comments)
Appropriate sample volume and containers? Yes X No (See Comments)
Sufficient labeling on container(s)?  Yes \( \sum_ \) No(See Comments)
Container(s) supplied by CAS?  Yes X No (See Comments)
Custody seal(s) intact?    N/A Yes No (See Comments)
Trip,Blank(s) received Yes No
If Trip Blank was supplied by CAS, record serial #TB
Temperature of sample(s)/cooler °C Temp Blank? Y (N) Circle One)
Voa's Marked Preserved? Yes No Filled Properly? Yes No (See Commen
Preserved Bottles Requiring pH check(s)? Yes Appropriate Preservation? Yes No
RUSH Turn around time? Yes Notified Date & Time
Short Hold-Time Analysis (check all that apply)
ASAP Res Cl D.O Flash Diss S2 Ferrous Fe
24HR         pH         Odor         Cr+6           48HR         BOD         Color         MBAS         Nitrate
Nitrite O-PO4 Sett Sol Turbidity
72HR Vapors
Notified Date & Time
Container(s) received and their preservative(s):
-17-4= 1 to + Glas's Jar
6 Encare
Comments Encores Trapsferred to Freezer upon  Receipt at LAB.
Receipt at LAYS.
Initials Date Time A 10/5/6/6 1224 river forms/cooler doc Pay 2/25/02



November 3, 2004

Therese Watson PW Environmental 230 Dove Court Santa Paula, CA 93060

RE: **Bauer Property** 

Dear Therese:

Enclosed are the results of the samples submitted to our laboratory on October 21, 2004. For your reference, these analyses have been assigned our service request number L0402178.

All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed. Columbia Analytical Services is not responsible for use of less than the complete report. Your report contains 27 pages.

Columbia Analytical Services is certified for environmental analyses by the California Department of Health Services (certificate number: 1296A); NELAP (certificate number: 02115CA); Los Angeles County Laboratory ID (No. 10151); and Arizona Department of Health Services (License number: AZ0136 and AZ0544).

If you have any questions, please call me at (818) 587-5550, extension 310.

Respectfully submitted,

Columbia Analytical Services, Inc.

Stuart Sigman >

**Project Chemist** 

SS/EAB

# Columbia Analytical Services, Inc.

### Acronyms

8015M California DHS LUFT Method **ASTM** American Society for Testing and Materials BOD Biochemical Oxygen Demand **BTEX** Benzene/Toluene/Ethylbenzene/Xylenes CAM California Assessment Metals CAS Number Chemical Abstract Service Registry Number CFC Chlorofluorocarbon COD Chemical Oxygen Demand CRDL Contract Required Detection Limit D Detected; result must be greater than zero. DL Detected; result must be greater than the detection limit. DLCS **Duplicate Laboratory Control Sample DMS** Duplicate Matrix Spike DOH or DHS Department of Health Services **ELAP** Environmental Laboratory Accreditation Program **EPA** U.S. Environmental Protection Agency GC Gas Chromatography GC/MS Gas Chromatography/Mass Spectrometry IC Ion Chromatography **ICB** Initial Calibration Blank sample **ICP** Inductively Coupled Plasma atomic emission spectrometry **ICV** Initial Calibration Verification sample **LCS** Laboratory Control Sample LUFT Leaking Underground Fuel Tank M Modified **MBAS** Methylene Blue Active Substances MDL Method Detection Limit MRL Method Reporting Limit MS Matrix Spike **MTBE** Methyl-tert-Butyl Ether NA Not Applicable NC Not Calculated ND None Detected at or above the Method Reporting/Detection Limit (MRL/MDL) NTU Nephelometric Turbidity Units ppb Parts Per Billion Parts Per Million ppm **PQL Practical Quantitation Limit** QA/QC Quality Assurance/Quality Control **RCRA** Resource Conservation and Recovery Act **RPD** Relative Percent Difference SIM Selected Ion Monitoring SM Standard Methods for the Examination of Water and Wastewater 18th Ed., 1992. **STLC** Solubility Threshold Limit Concentration SW Test Methods for Evaluating Solid Waste, Physical/Chemical MethodsSW-846, Third Edition, 1986 and as amended by Updates I, II, IIA, and IIB. **TCLP** Toxicity Characteristics Leaching Procedure TDS Total Dissolved Solids TPH Total Petroleum Hydrocarbons **TRPH** Total Recoverable Petroleum Hydrocarbons TSS Total Suspended Solids TTLC Total Threshold Limit Concentration VOA Volatile Organic Analyte(s) Qualifiers U Undetected at or above MDL/MRL (PQL). Estimated concentration. Analyte detected above MDL but below MRL (PQL). J В Hit above MRL (PQL) also found in Method Blank. E Analyte concentration above high point of ICAL. D Result from dilution.

X

See case narrative.

Client:

PW Environmental

Project:

Bauer Property

Sample Matrix:

Soil

Service Request No.: L0402178

Date Received:

10/21/04

### **CASE NARRATIVE**

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

### Sample Receipt

Soil samples were received for analysis at Columbia Analytical Services on 10/21/04. No discrepancies were noted upon initial sample inspection. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored at 4°C or frozen at -20°C upon receipt at the laboratory.

### Volatile Organic Compounds by EPA Method 8260B

The upper control criterion was exceeded for the following surrogates in sample EX3-1: Toluene-d8 and 4-Bromofluorobenzene. No target analytes were detected in the sample. The elevated recovery is due to sample matrix. The quality of the sample data is not significantly affected. No further corrective action was appropriate.

### Gasoline Range Organics by EPA Method 8015M

Sample EX3-1 was analyzed as medium level soil due to the presence of elevated levels of target analyte. The reporting limits are adjusted to reflect the dilution.

The control criterion was exceeded for the Bromofluorobenzene surrogate in samples EX3-1 and EX3-4 due to matrix interferences. Due to the presence of background components that prevented adequate resolution of the surrogate, accurate quantitation was not possible. No further corrective action was appropriate.

### **Total Metals**

Batch QC was run along with these samples. These results are provided for information purposes only. The Method Blank and Laboratory Control Sample were within control criteria. No anomalies were encountered during this analysis.

Approved by	 55	<u> </u>	Date	///	3/3	24
· <del></del> ·		.5				

Client: Project: PW Environmental **Bauer Property** 

Service Request:

L0402178

Cover Page - Organic Analysis Data Package **Volatile Organic Compounds** 

Sample Name	Lab Code	Collected	Received
EX3-1	L0402178-001	10/21/2004	10/21/2004
EX3-2	L0402178-002	10/21/2004	10/21/2004
EX3-3	L0402178-003	10/21/2004	10/21/2004
EX3-4	L0402178-004	10/21/2004	10/21/2004

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Name: Stuart Sigman

Title: Project Chemist

4

Cover Page - Organic

1 of 1 Page

Analytical Results

Client: Project: PW Environmental **Bauer Property** 

Sample Matrix:

Soil

Service Request: L0402178

Date Collected: 10/21/2004

Date Received: 10/21/2004

### Volatile Organic Compounds

Sample Name:

EX3-1

Lab Code:

L0402178-001

**Extraction Method:** 

EPA 5035

Units: ug/Kg Basis: Wet

Level: Low

Analysis Method:

8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	4.4	1.4	1	10/28/04	10/28/04	LWG0403938	
Toluene	ND U	4.4	1.5	1	10/28/04	10/28/04	LWG0403938	
Ethylbenzene	6.7	4.4	1.7	1	10/28/04	10/28/04	LWG0403938	
Total Xylenes	ND U	13	4.8	1	10/28/04	10/28/04	LWG0403938	·
Methyl tert-Butyl Ether	ND U	8.8	3.1	1	10/28/04	10/28/04	LWG0403938	
tert-Butyl Alcohol	ND U	44	30	1	10/28/04	10/28/04	LWG0403938	
Diisopropyl Ether	ND U	8.8	2.8	1	10/28/04	10/28/04	LWG0403938	
tert-Butyl Ethyl Ether	ND U	8.8	3.2	1	10/28/04	10/28/04	LWG0403938	
tert-Amyl Methyl Ether	ND U	8.8	3.2	1	10/28/04	10/28/04	LWG0403938	
1,2-Dibromoethane (EDB)	ND U	4.4	1.3	1	10/28/04	10/28/04	LWG0403938	
1,2-Dichloroethane (EDC)	ND U	4.4	1.7	1	10/28/04	10/28/04	LWG0403938	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	100	62-136	10/28/04	Acceptable
Toluene-d8	142	67-131	10/28/04	Outside Control Limits
4-Bromofluorobenzene	166	64-130	10/28/04	Outside Control Limits

Comments:

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**Analytical Results** 

Client: Project: PW Environmental **Bauer Property** 

Sample Matrix:

Soil

Service Request: L0402178 Date Collected: 10/21/2004

Date Received: 10/21/2004

# Volatile Organic Compounds

Sample Name:

EX3-2

Lab Code:

L0402178-002

**Extraction Method:** Analysis Method:

EPA 5035

8260B

Units: ug/Kg Basis: Wet

Level: Low

Analyte Name	Result	Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	4.4	1.4	1	10/28/04	10/28/04	LWG0403938	
Toluene	ND	U	4.4	1.5	1	10/28/04	10/28/04	LWG0403938	
Ethylbenzene	ND	U	4.4	1.7	1	10/28/04	10/28/04	LWG0403938	
Total Xylenes	ND	U	13	4.8	1	10/28/04	10/28/04	LWG0403938	
Methyl tert-Butyl Ether	ND	U	8.8	3.1	1	10/28/04	10/28/04	LWG0403938	
tert-Butyl Alcohol	ND	U	44	30	. 1	10/28/04	10/28/04	LWG0403938	
Diisopropyl Ether	ND	U	8.8	2.8	1	10/28/04	10/28/04	LWG0403938	
tert-Butyl Ethyl Ether	ND	U	8.8	3.2	1	10/28/04	10/28/04	LWG0403938	
tert-Amyl Methyl Ether	ND	U	8.8	3.2	1	10/28/04	10/28/04	LWG0403938	
1,2-Dibromoethane (EDB)	ND	U	4.4	1.3	1	10/28/04	10/28/04	LWG0403938	
1,2-Dichloroethane (EDC)	ND	U	4.4	1.7	1	10/28/04	10/28/04	LWG0403938	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Dibromofluoromethane	99	62-136	10/28/04	Acceptable	
Toluene-d8	103	67-131	10/28/04	Acceptable	
4-Bromofluorobenzene	119	64-130	10/28/04	Acceptable	

Comments:

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6 Form 1A - Organic

Page 1 of 1

Merged

Analytical Results

Client: Project: PW Environmental **Bauer Property** 

Sample Matrix:

Soil

Service Request: L0402178

**Date Collected:** 10/21/2004

Date Received: 10/21/2004

# Volatile Organic Compounds

Sample Name:

EX3-3

Lab Code:

L0402178-003

**Extraction Method:** Analysis Method:

EPA 5035

Units: ug/Kg Basis: Wet

Level: Low

8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	4.2	1.4	1	10/28/04	10/28/04	LWG0403938	
Toluene	ND U	4.2	1.5	1	10/28/04	10/28/04	LWG0403938	
Ethylbenzene	ND U	4.2	1.7	1	10/28/04	10/28/04	LWG0403938	
Total Xylenes	ND U	13	4.8	1	10/28/04	10/28/04	LWG0403938	
Methyl tert-Butyl Ether	ND U	8.4	3.1	1	10/28/04	10/28/04	LWG0403938	
tert-Butyl Alcohol	ND U	42	30	1	10/28/04	10/28/04	LWG0403938	
Diisopropyl Ether	ND U	8.4	2.8	1	10/28/04	10/28/04	LWG0403938	· · · · ·
tert-Butyl Ethyl Ether	ND U	8.4	3.2	1	10/28/04	10/28/04	LWG0403938	
tert-Amyl Methyl Ether	ND U	8.4	3.2	1	10/28/04	10/28/04	LWG0403938	
1,2-Dibromoethane (EDB)	ND U	4.2	1.3	i	10/28/04	10/28/04	LWG0403938	
l,2-Dichloroethane (EDC)	ND U	4.2	1.7	1	10/28/04	10/28/04	LWG0403938	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Dibromofluoromethane	98	62-136	10/28/04	Acceptable	
Toluene-d8	102	67-131	10/28/04	Acceptable	
4-Bromofluorobenzene	115	64-130	10/28/04	Acceptable	

Comments:

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Merged

Form 1A - Organic

Page SuperSet Reference:

RR7735

**Analytical Results** 

Client: Project: PW Environmental **Bauer Property** 

Sample Matrix:

Soil

Service Request: L0402178

**Date Collected:** 10/21/2004

Date Received: 10/21/2004

# Volatile Organic Compounds

Sample Name:

EX3-4

Lab Code:

L0402178-004

Extraction Method:

EPA 5035

Analysis Method:

8260B

Units: ug/Kg Basis: Wet

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	4.3	1.4	1	10/28/04	10/28/04	LWG0403938	
Toluene	ND U	4.3	1.5	1	10/28/04	10/28/04	LWG0403938	
Ethylbenzene	ND U	4.3	1.7	1	10/28/04	10/28/04	LWG0403938	
Total Xylenes	ND U	13	4.8	1	10/28/04	10/28/04	LWG0403938	
Methyl tert-Butyl Ether	ND U	8.5	3.1	1	10/28/04	10/28/04	LWG0403938	
tert-Butyl Alcohol	ND U	43	30	1	10/28/04	10/28/04	LWG0403938	
Diisopropyl Ether	ND U	8.5	2.8	1	10/28/04	10/28/04	LWG0403938	
tert-Butyl Ethyl Ether	ND U	8.5	3.2	1	10/28/04	10/28/04	LWG0403938	
tert-Amyl Methyl Ether	ND U	8.5	3.2	1	10/28/04	10/28/04	LWG0403938	
1,2-Dibromoethane (EDB)	ND U	4.3	1.3	1	10/28/04	10/28/04	LWG0403938	
1,2-Dichloroethane (EDC)	ND U	4.3	1.7	1	10/28/04	10/28/04	LWG0403938	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Dibromofluoromethane	96	62-136	10/28/04	Acceptable	
Toluene-d8	103	67-131	10/28/04	Acceptable	
4-Bromofluorobenzene	119	64-130	10/28/04	Acceptable	

Comments:

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1 of 1 Page

**Analytical Results** 

Client:

PW Environmental

Project: Sample Matrix: **Bauer Property** Soil

Service Request: L0402178

Date Collected: NA Date Received: NA

### Volatile Organic Compounds

Sample Name: Lab Code:

Method Blank

**Extraction Method:** Analysis Method: EPA 5035

LWG0403938-3

8260B

Units: ug/Kg Basis: Wet

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	5.0	1.4	1	10/28/04	10/28/04	LWG0403938	
Toluene	ND U	5.0	1.5	1	10/28/04	10/28/04	LWG0403938	
Ethylbenzene	ND U	5.0	1.7	1	10/28/04	10/28/04	LWG0403938	
Total Xylenes	ND U	15	4.8	1	10/28/04	10/28/04	LWG0403938	
Methyl tert-Butyl Ether	ND U	10	3.1	1	10/28/04	10/28/04	LWG0403938	
tert-Butyl Alcohol	ND U	50	30	1	10/28/04	10/28/04	LWG0403938	
Diisopropyl Ether	ND U	10	2.8	1	10/28/04	10/28/04	LWG0403938	
tert-Butyl Ethyl Ether	ND U	10	3.2	1	10/28/04	10/28/04	LWG0403938	
tert-Amyl Methyl Ether	ND U	10	3.2	1	10/28/04	10/28/04	LWG0403938	
1,2-Dibromoethane (EDB)	ND U	5.0	1.3	1	10/28/04	10/28/04	LWG0403938	
1,2-Dichloroethane (EDC)	ND U	5.0	1.7	1	10/28/04	10/28/04	LWG0403938	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Dibromofluoromethane	73	62-136	10/28/04	Acceptable	
Toluene-d8	99	67-131	10/28/04	Acceptable	
4-Bromofluorobenzene	113	64-130	10/28/04	Acceptable	

Comments:

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Form 1A - Organic

Page 1 of 1

QA/QC Report

Client:

PW Environmental

Project:

**Bauer Property** 

Sample Matrix:

Soil

Service Request: L0402178

Surrogate Recovery Summary **Volatile Organic Compounds** 

Extraction Method: Analysis Method:

EPA 5035

8260B

Units: PERCENT

Level: Low

Sample Name	Lab Code	Sur1	Sur2	<u>Sur3</u>
EX3-1	L0402178-001	100	142 *	166 *
EX3-2	L0402178-002	99	103	119
EX3-3	L0402178-003	98	102	115
EX3-4	L0402178-004	96	103	119
Method Blank	LWG0403938-3	73	99	113
Lab Control Sample	LWG0403938-1	97	102	112
Duplicate Lab Control Sample	LWG0403938-2	85	99	111

Surrogate Recovery Control Limits (%)

Sur1 = Dibromofluoromethane 62-136 Sur2 = Toluene-d8 67-131 Sur3 = 4-Bromofluorobenzene 64-130

Results flagged with an asterisk (\*) indicate values outside control criteria. Results flagged with a pound (#) indicate the control criteria is not applicable.

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Page 1 of 1

QA/QC Report

Client:

PW Environmental

Project: Sample Matrix: **Bauer Property** 

Soil

Service Request: L0402178 Date Extracted: 10/28/2004

Date Analyzed: 10/28/2004

### Lab Control Spike/Duplicate Lab Control Spike Summary **Volatile Organic Compounds**

**Extraction Method:** 

EPA 5035

Analysis Method:

8260B

Units: ug/Kg

Basis: Wet

Level: Low

Extraction Lot: LWG0403938

Lab Control Sample

**Duplicate Lab Control Sample** 

		/G0403938-1 Control Spik			/G0403938-2 e Lab Control		%Rec		RPD
Analyte Name	Result	Expected	%Rec	Result	Expected	%Rec	Limits	RPD	Limit
Benzene	16.5	20.0	83	15.9	20.0	80	64-125	4	30
Toluene	17.2	20.0	86	16.9	20.0	85	69-119	2	30
Ethylbenzene	19.9	20.0	100	19.6	20.0	98	68-120	2	30
Total Xylenes	61.2	60.0	102	60.5	60.0	101	65-121	1	30
Methyl tert-Butyl Ether	38.6	40.0	96	37.3	40.0	93	64-131	4	30
tert-Butyl Alcohol	416	400	104	397	400	99	60-128	5	30
Diisopropyl Ether	35.9	40.0	90	35.5	40.0	89	70-124	1	30
tert-Butyl Ethyl Ether	38.5	40.0	96	38.1	40.0	95	70-126	1	30
tert-Amyl Methyl Ether	38.0	40.0	95	37.8	40.0	94	74-122	1	30
1,2-Dibromoethane (EDB)	17.9	20.0	90	17.0	20.0	85	74-118	5	30
1,2-Dichloroethane (EDC)	16.3	' 20.0	81	15.5	20.0	78	65-128	5	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Project: PW Environmental **Bauer Property** 

Service Request:

L0402178

Cover Page - Organic Analysis Data Package Gasoline Range Organics (GRO)

Sample Name	Lab Code	Date Collected	Date Received
EX3-1	L0402178-001	10/21/2004	10/21/2004
EX3-2	L0402178-002	10/21/2004	10/21/2004
EX3-3	L0402178-003	10/21/2004	10/21/2004
EX3-4	L0402178-004	10/21/2004	10/21/2004

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Name: Stuart Sigman

Title: Project Chemist

12

Cover Page - Organic

Page 1 of

Analytical Results

Client: Project: PW Environmental Bauer Property

Sample Matrix:

Soil

Service Request: L0402178

10/28/04

Date Collected: 10/21/2004 **Date Received:** 10/21/2004

Gasoline Range Organics (GRO)

Sample Name:

EX3-1

Lab Code:

L0402178-001

260 D

**Extraction Method:** 

EPA 5035

9.1

Units: mg/Kg Basis: Wet

Level: Med

Analysis Method:

**Analyte Name** 

Gasoline

8015B

Dilution Date Date Extraction **Factor** Lot Result Q **PQL MDL** Extracted Analyzed Note LWG0403935

10/28/04

2

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	495	62-133	10/28/04	Outside Control Limits

4.6

Comments:

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Form 1A - Organic

Page 1 of

**Analytical Results** 

Client: Project:

PW Environmental **Bauer Property** 

Sample Matrix:

Soil

Service Request: L0402178

Date Collected: 10/21/2004

Date Received: 10/21/2004

Gasoline Range Organics (GRO)

Sample Name:

EX3-2

Lab Code:

L0402178-002

**Extraction Method:** 

EPA 5035

Units: mg/Kg Basis: Wet

Level: Low

Analysis Method:

8015B

Dilution Date Date Extraction **Analyte Name** Result Q Factor Extracted PQL **MDL** Analyzed Lot Note Gasoline ND U 0.045 LWG0403934 0.090 1 10/28/04 10/28/04

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	90	58-119	10/28/04	Acceptable

Comments:

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Form 1A - Organic

Merged

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Page

1 of 1

SuperSet Reference: RR7746

**Analytical Results** 

Client: Project: Sample Matrix: PW Environmental Bauer Property

Soil

Service Request: L0402178 **Date Collected:** 10/21/2004

**Date Received:** 10/21/2004

Gasoline Range Organics (GRO)

Sample Name:

EX3-3

Lab Code:

L0402178-003

**Extraction Method:** Analysis Method:

EPA 5035

Units: mg/Kg Basis: Wet

Level: Low

8015B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline	ND U	0.087	0.045	1	10/28/04	10/28/04	LWG0403934	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	83	58-119	10/28/04	Acceptable	

Comments:

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15

Analytical Results

Client: Project: PW Environmental **Bauer Property** 

Sample Matrix:

Soil

Service Request: L0402178 **Date Collected:** 10/21/2004

Date Received: 10/21/2004

Gasoline Range Organics (GRO)

Sample Name:

EX3-4

Lab Code:

L0402178-004

Extraction Method:

EPA 5035

Units: mg/Kg Basis: Wet

Level: Low

Analysis Method:

8015B

				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline	1.5	0.088	0.045	1	10/28/04	10/28/04	LWG0403934	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	489	58-119	10/28/04	Outside Control Limits

Comments:

16

Analytical Results

Client: Project: PW Environmental

Sample Matrix:

**Bauer Property** 

Soil

Service Request: L0402178

Date Collected: NA Date Received: NA

Gasoline Range Organics (GRO)

Sample Name:

Method Blank

Lab Code:

LWG0403934-3

EPA 5035

Analysis Method:

8015B

Units: mg/Kg Basis: Wet

Level: Low

Extraction Method:

				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline	ND U	0.10	0.045	1	10/28/04	10/28/04	LWG0403934	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	93	58-119	10/28/04	Acceptable

Comments:

Merged

**Analytical Results** 

Client: Project: PW Environmental

Sample Matrix:

**Bauer Property** 

Soil

Service Request: L0402178

Date Collected: NA Date Received: NA

Gasoline Range Organics (GRO)

Sample Name: Lab Code:

Method Blank

Extraction Method: Analysis Method:

LWG0403935-3

EPA 5035 8015B

Units: mg/Kg

Basis: Wet

Level: Med

Dilution Date Date Extraction **PQL Factor** Extracted Analyzed Lot Note **Analyte Name** Result Q **MDL** LWG0403935 ND U 5.0 2.3 1 10/28/04 10/28/04 Gasoline

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	92	62-133	10/28/04	Acceptable	

Comments:

QA/QC Report

Client:

PW Environmental

Project:

**Bauer Property** 

Sample Matrix:

Soil

Service Request: L0402178

**Surrogate Recovery Summary** Gasoline Range Organics (GRO)

**Extraction Method:** 

EPA 5035

Analysis Method:

Sample Name

EX3-2

EX3-3

EX3-4

8015B

Units: PERCENT

Level: Low

Lab Code Sur1 L0402178-002 90 83 L0402178-003 489 L0402178-004

Method Blank Lab Control Sample

Duplicate Lab Control Sample

LWG0403934-3 LWG0403934-1 LWG0403934-2 93 99

100

Surrogate Recovery Control Limits (%)

Sur1 = Bromofluorobenzene

58-119

Results flagged with an asterisk (\*) indicate values outside control criteria. Results flagged with a pound (#) indicate the control criteria is not applicable.

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QA/QC Report

Client: Project: PW Environmental

Sample Matrix:

**Bauer Property** Soil

Service Request: L0402178

**Surrogate Recovery Summary** Gasoline Range Organics (GRO)

Extraction Method:

EPA 5035

Analysis Method:

8015B

Units: PERCENT

Level: Med

Sample Name	Lab Code	<u>Sur1</u>
EX3-1	L0402178-001	495 D *
Method Blank	LWG0403935-3	92
Lab Control Sample	LWG0403935-1	100
Duplicate Lab Control Sample	LWG0403935-2	105

Surrogate Recovery Control Limits (%)

Sur1 = Bromofluorobenzene

62-133

Results flagged with an asterisk (\*) indicate values outside control criteria. Results flagged with a pound (#) indicate the control criteria is not applicable.

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Form 2A - Organic

Page 1 of 1

Printed: 11/02/2004 14:14:30 P:\STEALTH\CRYSTAL.RPT\Form2.rpt

SuperSet Reference:

RR7746

QA/QC Report

Client: Project: PW Environmental **Bauer Property** 

Sample Matrix:

Soil

Service Request: L0402178

Date Extracted: 10/28/2004

Date Analyzed: 10/28/2004

Lab Control Spike/Duplicate Lab Control Spike Summary Gasoline Range Organics (GRO)

Extraction Method: Analysis Method:

EPA 5035

8015B

Units: mg/Kg Basis: Wet

Level: Low

Extraction Lot: LWG0403934

Lab Control Sample LWG0403934-1

Duplicate Lab Control Sample

LWG0403934-2

**Duplicate Lab Control Spike** 

Lab Control Spike **RPD** %Rec **RPD** Limits **Analyte Name** Result Expected %Rec Result Expected %Rec Limit 0.959 1.00 96 0.972 97 Gasoline 1.00 76-117 1 20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

RR7746

QA/QC Report

Client: Project:

PW Environmental **Bauer Property** 

Sample Matrix:

Soil

Service Request: L0402178

Date Extracted: 10/28/2004

Date Analyzed: 10/28/2004

### Lab Control Spike/Duplicate Lab Control Spike Summary Gasoline Range Organics (GRO)

Extraction Method: **Analysis Method:** 

EPA 5035 8015B

Units: mg/Kg Basis: Wet

Level: Med Extraction Lot: LWG0403935

Lab Control Sample

LWG0403935-1

Duplicate Lab Control Sample

LWG0403935-2

Lab Control Spike **Duplicate Lab Control Spike** %Rec **RPD** Limits RPD Limit Analyte Name Result %Rec Expected Result Expected %Rec 44.5 87 46.6 Gasoline 51.0 51.0 91 74-111 5 20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

### Analytical Report

Client:

PW Environmental

Project:

Bauer Property

Service Request: L0402178

Date Collected: 10/21/04

Sample Matrix:

Soil

Date Collected: 10/21/04

Date Received: 10/21/04

Lead, Total

Prep Method:

**EPA 3050B** 

Units: mg/Kg (ppm)

Analysis Method:

6020

Basis: Wet

Test Notes:

Sample Name	Lab Code	PQL	MDL	Dilution Factor	Date Digested	Date Analyzed	Result	Result Notes
EX3-1	L0402178-001	0.4	0.04	1	10/22/04	10/28/04	13	
EX3-2	L0402178-002	0.4	0.04	1	10/22/04	10/28/04	8.6	
EX3-3	L0402178-003	0.4	0.04	1	10/22/04	10/28/04	7.0	
EX3-4	L0402178-004	0.4	0.04	1	10/22/04	10/28/04	10	
Method Blank	L041022-MB1	0.4	0.04	1	10/22/04	10/28/04	0.1	J

Estimated concentration. The result is less than the PQL but greater than the MDL.

Approved By: \_\_

55

Date: 11/3/04

1A/020597p

QA/QC Report

Client: Project: PW Environmental **Bauer Property** 

Sample Matrix:

Soil

Service Request: L0402178

Date Collected: NA Date Received: NA Date Digested: 10/22/04

Date Analyzed: 10/28/04

Matrix Spike/Duplicate Matrix Spike Summary

Lead, Total

Sample Name:

Lab Code: Test Notes: Batch QC

X0401011-001MS

X0401011-001DMS

Units: mg/Kg (ppm)

Basis: Wet

Percent Recovery

	Prep	Analysis		Spike	Level	Sample	Spike	Result			CAS Acceptance	Relative Percent	Result
Analyte	Method	Method	PQL	MS	DMS	Result	MS	DMS	MS	DMS	Limits	Difference	Notes
Lead, Total	EPA 3050B	6020	0.4	1000	1000	1522	2640	2620	112	110	41-124	<1	

Approved By: \_

DMS/020597p

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IMETCLTS XLT

QA/QC Report

Client:

PW Environmental

Project:

Bauer Property

LCS Matrix:

Soil

Service Request: L0402178

Date Collected: NA

Date Received: NA

Date Digested: 10/22/04

Date Analyzed: 10/28/04

Laboratory Control Sample Summary

Lead, Total

Sample Name: Lab Code: Lab Control Sample

L041022-LCS

Units: mg/Kg (ppm)

Basis: NA

Test Notes:

CAS Percent Recovery Prep **Analysis** True Percent Acceptance Result Analyte Method Method Value Result Recovery Limits Notes Lead, Total **EPA 3050B** 6020 1000 1068 107 81-105

сы одозу гр

# ENVIRONMENTAL 2040/21/3 CHAIN OF CUSTODY RECORD (805) 656-4677 (805) 525-5563 FAX (805) 5

(805) - 779+959 (905)	(8U5) 05040// • (8U5) 5.5503 • FAX (8U5)	805) 525-2896		Lab:	,	ANALYSIS R	REQUESTED		
PROJECT NAME: KILLE	FROCITY		ERS			1242			a
PROJECT ADDRESS: 1140 S	S. Wells Rose		NIAT		9760p	/0209/		1601-(	ZHIK ZI
		,	CON		EDC 8	0109 p		OH 821	2 HK 7.
PROJECT MANAGER: ( . Watson	50N ,			N N SVEI 801	NOXAGO EDB 12W EC			II BE ICS	24. M.
SAMPLER SIGNATURE: LOLEL	Devey Water	1286-198-8835	ИВЕК	FOM [6 8012V 8012V (DIA)	N CTOTA	I MA⊃	10978 K	19:	PID Reading.
SAMPLE SAMPLE LOCATION ID	DEPTH DATE	TIME SAMPLE MATRIX	NUN	O-H9T O-H9T	TPH-CI BTEX, FULL	TCLP		liii deJ	Odor, Staining, Other IAI, etc.
DEX3-1 EXCV. #3	S' 10/21/04 9:40		1,+		X				
2 EX3-2 EXCV#3	05:6 19/12/01 18		γ /	>4	₹ >				
3 EX3-3 EX4#3	8.5 16/2//0	10:00 Soil	7	×	<del>/</del>				
	5.5 10/2/10/ 10:10	10:10 Soi.	7	-><	>> >>				
	,		•	/					
(signature)		RECEIVED BY. (signature)	}	458.5		DATE (20)	rojn	TIME O	برا
(signature)		RECEIVED BY: (signature)	7	SER	1	DATE (O)	holy	TIME 134	45
Method of snipment, additional comments:	ii X USTCF	Required MIRIS to:				Central	San Bernardino	KCEHD	OCHCA
Eax preliminary data ASAP	NONE	VCLUFT PS.	S.B. CO PSDALUFT	RWOCB	Lanontan RWOCB	Coast RWOCB	County FD	Kern County	Orange County

# SAMPLE RECEIPT FORM

Service Request No: L040 2178 Client: PW. LOW
Sample(s) delivered by: Client CAS Emp After Hours DHL
Golden State Overnight Fed X UPS Other Courier
Chain of Custody filled out accurately? Yes ✓ No(See Comments)
Appropriate sample volume and containers? Yes No (See Comments)
Sufficient labeling on container(s)? Yes No(See Comments)
Container(s) supplied by CAS?  Yes No (See Comments)
Custody seal(s) intact? N/A \( \sqrt{Yes} \) No(See Comments)
Trip Blank(s) received Yes No
If Trip Blank was supplied by CAS, record serial #TB
Temperature of sample(s)/cooler °C Temp Blank? Y of N Circle One)
Voa's Marked Preserved? Yes No Filled Properly? Yes No (See Comments)
Preserved Bottles Requiring pH check(s)? Yes Appropriate Preservation? Yes No
RUSH Turn around time? Yes Notified Date & Time
Short Hold-Time Analysis (check all that apply)
ASAP Res Cl D.O Flash Diss S2 Ferrous Fe  24HR
Notified Date & Time
Container(s) received and their preservative(s):
-1->-4= 1-402 Jar
6-bnures
Comments DNORES TRANSPISERED TO PRISEZER UPUN PLECEIPT IN LAB
Initials, Date, Time LK w/21/04 1500 r:\sr forms\cooler.doc Rev. 2/25/02



December 5, 2004

Robert Orlando PW Environmental 230 Dove Court Santa Paula, CA 93060

RE: Bauer Manufacturing-REM EX

Dear Robert:

Enclosed are the results of the samples submitted to our laboratory on November 17, 2004. For your reference, these analyses have been assigned our service request number L0402369.

All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed. Columbia Analytical Services is not responsible for use of less than the complete report. Your report contains pages.

Columbia Analytical Services is certified for environmental analyses by the California Department of Health Services (certificate number: 1296A); NELAP (certificate number: 02115CA); Los Angeles County Laboratory ID (No. 10151); and Arizona Department of Health Services (License number: AZ0136 and AZ0544).

If you have any questions, please call me at (818) 587-5550, extension 310.

Respectfully submitted,

Columbia Analytical Services, Inc.

Stuart Sigman
Project Chemist

SS/EAB

# Columbia Analytical Services, Inc.

Acronyms 8015M California DHS LUFT Method **ASTM** American Society for Testing and Materials BOD Biochemical Oxygen Demand BTEX Benzene/Toluene/Ethylbenzene/Xylenes CAM California Assessment Metals CAS Number Chemical Abstract Service Registry Number CFC Chlorofluorocarbon COD Chemical Oxygen Demand Contract Required Detection Limit **CRDL** Detected; result must be greater than zero. D DL Detected; result must be greater than the detection limit. **DLCS Duplicate Laboratory Control Sample** DMS Duplicate Matrix Spike DOH or DHS Department of Health Services **ELAP Environmental Laboratory Accreditation Program EPA** U.S. Environmental Protection Agency GC Gas Chromatography GC/MS Gas Chromatography/Mass Spectrometry IC Ion Chromatography **ICB** Initial Calibration Blank sample **ICP** Inductively Coupled Plasma atomic emission spectrometry **ICV** Initial Calibration Verification sample LCS Laboratory Control Sample LUFT Leaking Underground Fuel Tank M Modified **MBAS** Methylene Blue Active Substances MDL Method Detection Limit MRL Method Reporting Limit MS Matrix Spike **MTBE** Methyl-tert-Butyl Ether NA Not Applicable NC Not Calculated ND None Detected at or above the Method Reporting/Detection Limit (MRL/MDL) NTU Nephelometric Turbidity Units Parts Per Billion ppb Parts Per Million ppm PQL Practical Quantitation Limit OA/OC Quality Assurance/Quality Control RCRA Resource Conservation and Recovery Act **RPD** Relative Percent Difference SIM Selected Ion Monitoring SM Standard Methods for the Examination of Water and Wastewater 18th Ed., 1992. **STLC** Solubility Threshold Limit Concentration SW Test Methods for Evaluating Solid Waste, Physical/Chemical MethodsSW-846, Third Edition, 1986 and as amended by Updates I, II, IIA, and IIB. **TCLP** Toxicity Characteristics Leaching Procedure TDS Total Dissolved Solids **TPH** Total Petroleum Hydrocarbons TRPH Total Recoverable Petroleum Hydrocarbons TSS Total Suspended Solids TTLC **Total Threshold Limit Concentration** VOA Volatile Organic Analyte(s)

### Qualifiers

U Undetected at or above MDL/MRL (PQL).

J Estimated concentration. Analyte detected above MDL but below MRL (PQL).

B Hit above MRL (PQL) also found in Method Blank.

E Analyte concentration above high point of ICAL.

D Result from dilution.

X See case narrative.

Client:

PW Environmental

Service Request No.: L0402369

Project:

Bauer Manufacturing-REM EX

Date Received:

11/17/04

Sample Matrix:

Soil

### **CASE NARRATIVE**

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

### Sample Receipt

Soil samples were received for analysis at Columbia Analytical Services on 11/17/04. No discrepancies were noted upon initial sample inspection. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored frozen at -20°C upon receipt at the laboratory.

### Volatile Organic Compounds by EPA Method 8260B

The control criterion was exceeded for the 4-Bromofluorobenzene surrogates in sample EX4-3 due to matrix interferences. Due to the presence of non-target background components that prevented adequate resolution of the surrogate, accurate quantitation was not possible. No further corrective action was appropriate.

### Gasoline Range Organics by EPA Method 8015M

Sample EX4-3 was analyzed as medium level soil due to the presence of elevated levels of target analyte. Further dilution was necessary due to high level of Hydrocarbons. The reporting limits are adjusted to reflect the dilution.

The control criterion for the Bromofluorobenzene surrogates in sample EX4-3 is not applicable. The analysis of the sample required a dilution, which resulted in a surrogate concentration below the Method Reporting Limit (MRL). No further corrective action was appropriate.

The Bromofluorobenzene surrogate recovery was exceeded also in sample EX4-1 due to matrix interferences. Due to the presence of non-target background components that prevented adequate resolution of the surrogate, accurate quantitation was not possible. No further corrective action was appropriate.

### **Total Metals**

Batch QC was run along with these samples. These results are provided for information purposes only. The Method Blank and Laboratory Control Sample were within control criteria. No anomalies were encountered during this analysis.

Approved by	55	Date 12/5/04
• •	3	

Client: Project: PW Environmental

Bauer Manufacturing-REM EX

Service Request:

L0402369

Cover Page - Organic Analysis Data Package Volatile Organic Compounds

		Date	Date
Sample Name	Lab Code	Collected	Received
EX4-1	L0402369-001	11/17/2004	11/17/2004
EX4-2	L0402369-002	11/17/2004	11/17/2004
EX4-3	L0402369-003	11/17/2004	11/17/2004

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Name: Start Sigman

Title: Project Chmish

Cover Page - Organic

1 of

Analytical Results

Client:

PW Environmental

Project:

Bauer Manufacturing-REM EX

Sample Matrix:

Soil

Service Request: L0402369 Date Collected: 11/17/2004

**Date Received:** 11/17/2004

# Volatile Organic Compounds

Sample Name:

EX4-1

Lab Code:

L0402369-001

Extraction Method: EPA 5035 Analysis Method:

8260B

Units: ug/Kg Basis: Wet

Level: Low

Analyte Name	Result	Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	5.2	1.5	1	11/23/04	11/23/04	LWG0404299	
Toluene	ND	U	5.2	1.6	1	11/23/04	11/23/04	LWG0404299	
Ethylbenzene	ND	U	5.2	1.8	1	11/23/04	11/23/04	LWG0404299	
Total Xylenes	ND	U	16	5.0	1	11/23/04	11/23/04	LWG0404299	
Methyl tert-Butyl Ether	ND	U	11	3.2	1	11/23/04	11/23/04	LWG0404299	
tert-Butyl Alcohol	ND	U	52	31	1	11/23/04	11/23/04	LWG0404299	
Diisopropyl Ether	ND	U	11	2.9	1	11/23/04	11/23/04	LWG0404299	
tert-Butyl Ethyl Ether	ND	U	11	3.3	1	11/23/04	11/23/04	LWG0404299	
tert-Amyl Methyl Ether	ND	U	11	3.3	1	11/23/04	11/23/04	LWG0404299	
1,2-Dibromoethane (EDB)	ND	U	5.2	1.4	1	11/23/04	11/23/04	LWG0404299	
1,2-Dichloroethane (EDC)	ND	U	5.2	1.8	1	11/23/04	11/23/04	LWG0404299	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Dibromofluoromethane	88	62-136	11/23/04	Acceptable	
Toluene-d8	90	67-131	11/23/04	Acceptable	
4-Bromofluorobenzene	109	64-130	11/23/04	Acceptable	

Comments:

Analytical Results

Client:

PW Environmental

Project:

Bauer Manufacturing-REM EX

Sample Matrix:

Soil

Service Request: L0402369 Date Collected: 11/17/2004

**Date Received:** 11/17/2004

# Volatile Organic Compounds

Sample Name:

EX4-2

Lab Code:

Extraction Method:

EPA 5035

L0402369-002

Analysis Method:

8260B

Units: ug/Kg Basis: Wet

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	4.9	1.4	1	11/23/04	11/23/04	LWG0404299	
Toluene	ND U	4.9	1.5	1	11/23/04	11/23/04	LWG0404299	
Ethylbenzene	ND U	4.9	1.7	1	11/23/04	11/23/04	LWG0404299	
Total Xylenes	ND U	15	4.8	1	11/23/04	11/23/04	LWG0404299	
Methyl tert-Butyl Ether	ND U	9.7	3.1	1	11/23/04	11/23/04	LWG0404299	
tert-Butyl Alcohol	ND U	49	30	1	11/23/04	11/23/04	LWG0404299	
Diisopropyl Ether	ND U	9.7	2.8	1	11/23/04	11/23/04	LWG0404299	
tert-Butyl Ethyl Ether	ND U	9.7	3.2	1	11/23/04	11/23/04	LWG0404299	
tert-Amyl Methyl Ether	ND U	9.7	3.2	1	11/23/04	11/23/04	LWG0404299	
1,2-Dibromoethane (EDB)	ND U	4.9	1.3	1	11/23/04	11/23/04	LWG0404299	
1,2-Dichloroethane (EDC)	ND U	4.9	1.7	1	11/23/04	11/23/04	LWG0404299	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Dibromofluoromethane	90	62-136	11/23/04	Acceptable	
Toluene-d8	93	67-131	11/23/04	Acceptable	
4-Bromofluorobenzene	111	64-130	11/23/04	Acceptable	

Comments:

Analytical Results

Client:

PW Environmental

Project:

Bauer Manufacturing-REM EX

Sample Matrix:

Service Request: L0402369 Date Collected: 11/17/2004

**Date Received:** 11/17/2004

# Volatile Organic Compounds

Sample Name:

EX4-3

Lab Code:

L0402369-003

Extraction Method: EPA 5035

Units: ug/Kg Basis: Wet

Level: Low

Analysis Method:

8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND U	4.4	1.4	1	11/23/04	11/23/04	LWG0404299	
Toluene	ND U	4.4	1.5	1	11/23/04	11/23/04	LWG0404299	
Ethylbenzene	ND U	4.4	1.7	1	11/23/04	11/23/04	LWG0404299	
Total Xylenes	ND U	13	4.8	1	11/23/04	11/23/04	LWG0404299	
Methyl tert-Butyl Ether	ND U	8.8	3.1	1	11/23/04	11/23/04	LWG0404299	
tert-Butyl Alcohol	ND U	44	30	I	11/23/04	11/23/04	LWG0404299	
Diisopropyl Ether	ND U	8.8	2.8	1	11/23/04	11/23/04	LWG0404299	
tert-Butyl Ethyl Ether	ND U	8.8	3.2	1	11/23/04	11/23/04	LWG0404299	
tert-Amyl Methyl Ether	ND U	8.8	3.2	1	11/23/04	11/23/04	LWG0404299	
1,2-Dibromoethane (EDB)	ND U	4.4	1.3	1	11/23/04	11/23/04	LWG0404299	····
1,2-Dichloroethane (EDC)	ND U	4.4	1.7	1	11/23/04	11/23/04	LWG0404299	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	93	62-136	11/23/04	Acceptable
Toluene-d8	115	67-131	11/23/04	Acceptable
4-Bromofluorobenzene	191	64-130	11/23/04	Outside Control Limits

Comments:

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Analytical Results

Client:

PW Environmental

Project:

Bauer Manufacturing-REM EX

Sample Matrix:

Service Request: L0402369

Date Collected: NA Date Received: NA

### Volatile Organic Compounds

Sample Name:

Method Blank

Lab Code:

LWG0404299-3

Extraction Method:

EPA 5035

Units: ug/Kg

Basis: Wet

Level: Low

8260B Analysis Method:

	_			Dilution	Date	Date	Extraction	<b></b> .
Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Benzene	ND U	5.0	1.4	1	11/23/04	11/23/04	LWG0404299	
Toluene	ND U	5.0	1.5	1	11/23/04	11/23/04	LWG0404299	
Ethylbenzene	ND U	5.0	1.7	1	11/23/04	11/23/04	LWG0404299	
Total Xylenes	ND U	15	4.8	1	11/23/04	11/23/04	LWG0404299	
Methyl tert-Butyl Ether	ND U	10	3.1	1	11/23/04	11/23/04	LWG0404299	
tert-Butyl Alcohol	ND U	50	30	1	11/23/04	11/23/04	LWG0404299	
Diisopropyl Ether	ND U	10	2.8	1	11/23/04	11/23/04	LWG0404299	<del></del>
tert-Butyl Ethyl Ether	ND U	10	3.2	1	11/23/04	11/23/04	LWG0404299	
tert-Amyl Methyl Ether	ND U	10	3.2	1	11/23/04	11/23/04	LWG0404299	
1,2-Dibromoethane (EDB)	ND U	5.0	1.3	1	11/23/04	11/23/04	LWG0404299	
1,2-Dichloroethane (EDC)	ND U	5.0	1.7	1	11/23/04	11/23/04	LWG0404299	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	93	62-136	11/23/04	Acceptable
Toluene-d8	95	67-131	11/23/04	Acceptable
4-Bromofluorobenzene	111	64-130	11/23/04	Acceptable

Comments:

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Form 1A - Organic

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SuperSet Reference: RR7990 Page 1 of 1

QA/QC Report

Client: Project: PW Environmental

Bauer Manufacturing-REM EX

Sample Matrix:

Surrogate Recovery Summary Volatile Organic Compounds

Extraction Method: Analysis Method:

EPA 5035

8260B

Units: PERCENT

Level: Low

Service Request: L0402369

Sample Name	Lab Code	Sur1	Sur2	Sur3
EX4-1	L0402369-001	88	90	109
EX4-2	L0402369-002	90	93	111
EX4-3	L0402369-003	93	115	191 *
Method Blank	LWG0404299-3	93	95	111
Lab Control Sample	LWG0404299-1	98	97	112
Duplicate Lab Control Sample	LWG0404299-2	96	95	112

Surrogate Recovery Control Limits (%)

Sur1 = Dibroi	mofluoromethane	62-136
Sur2 = Toluer	ne-d8	67-131
Sur3 = 4-Broi	mofluorobenzene	64-130

Results flagged with an asterisk (\*) indicate values outside control criteria. Results flagged with a pound (#) indicate the control criteria is not applicable.

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Form 2A - Organic

Page 1 of 1

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SuperSet Reference:

RR7990

QA/QC Report

Client:

PW Environmental

Project:

Bauer Manufacturing-REM EX

Sample Matrix:

Soil

Service Request: L0402369 Date Extracted: 11/23/2004

Date Analyzed: 11/23/2004

### Lab Control Spike/Duplicate Lab Control Spike Summary Volatile Organic Compounds

**Extraction Method:** Analysis Method:

EPA 5035 8260B

Units: ug/Kg

Basis: Wet

Level: Low

Extraction Lot: LWG0404299

Lab Control Sample

**Duplicate Lab Control Sample** I WG0404200-2

		G0404299-1 Control Spik		Duplicate Lab Control Spike			%Rec		RPD
Analyte Name	Result	Expected	%Rec	Result	Expected	%Rec	Limits	RPD	Limit
Benzene	17.2	20.0	86	18.2	20.0	91	64-125	6	30
Toluene	16.9	20.0	84	18.0	20.0	90	69-119	6	30
Ethylbenzene	19.2	20.0	96	20.8	20.0	104	68-120	8	30
Total Xylenes	59.7	60.0	99	64.8	60.0	108	65-121	8	30
Methyl tert-Butyl Ether	38.8	40.0	97	40.5	40.0	101	64-131	4	30
tert-Butyl Alcohol	419	400	105	457	400	114	60-128	9	30
Diisopropyl Ether	39.0	40.0	97	41.7	40.0	104	70-124	7	30
tert-Butyl Ethyl Ether	40.3	40.0	101	42.2	40.0	106	70-126	5	30
tert-Amyl Methyl Ether	38.2	40.0	95	40.8	40.0	102	74-122	7	30
1,2-Dibromoethane (EDB)	16.5	20.0	83	17.2	20.0	86	74-118	4	30
1,2-Dichloroethane (EDC)	17.3	, 20.0	87	18.0	20.0	90	65-128	4	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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RR7990

Project:

PW Environmental

Bauer Manufacturing-REM EX

Service Request:

L0402369

Cover Page - Organic Analysis Data Package Gasoline Range Organics (GRO)

		Date	Date
Sample Name	Lab Code	Collected	Received
EX4-1	L0402369-001	11/17/2004	11/17/2004
EX4-2	L0402369-002	11/17/2004	11/17/2004
EX4-3	L0402369-003	11/17/2004	11/17/2004

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Name: Stuart Sigman

Title: Project Chemist

RR7965

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Cover Page - Organic

Page

1 of

Analytical Results

Client:

PW Environmental

Project:

Bauer Manufacturing-REM EX

Sample Matrix:

Soil

Service Request: L0402369 Date Collected: 11/17/2004

**Date Received:** 11/17/2004

Gasoline Range Organics (GRO)

Sample Name:

EX4-1

Lab Code:

Extraction Method: Analysis Method:

L0402369-001

EPA 5035 8015B

Units: mg/Kg

Basis: Wet

Level: Low

				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	PQL _	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline	2.0	0.091	0.045	1	11/20/04	11/20/04	LWG0404265	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	377	58-119	11/20/04	Outside Control Limits

Comments:

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Form 1A - Organic

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SuperSet Reference:

Analytical Results

Client: Project: PW Environmental

Bauer Manufacturing-REM EX

ND U

Sample Matrix:

Service Request: L0402369

Date Collected: 11/17/2004 **Date Received:** 11/17/2004

Gasoline Range Organics (GRO)

Sample Name:

EX4-2

Lab Code:

Gasoline

L0402369-002

**Extraction Method:** Analysis Method:

EPA 5035 8015B

Units: mg/Kg

Basis: Wet

Level: Low

Dilution Date Date Extraction Extracted **PQL** MDL **Factor** Analyzed Lot Note Analyte Name Result Q LWG0404265

0.090

0.045

11/20/04

11/20/04

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	76	58-119	11/20/04	Acceptable	

Comments:

Analytical Results

Client:

PW Environmental

Project:

Bauer Manufacturing-REM EX

Sample Matrix:

Soil

Service Request: L0402369

Date Collected: 11/17/2004

**Date Received:** 11/17/2004

Gasoline Range Organics (GRO)

Sample Name:

EX4-3

Lab Code:

L0402369-003

**Extraction Method:** Analysis Method:

EPA 5035

8015B

Units: mg/Kg

Basis: Wet

Level: Med

Lot

Note

Dilution Date Date Extraction Analyte Name Result Q **PQL MDL Factor** Extracted Analyzed

Gasoline 1200 D 50 23 10 11/20/04 11/20/04 LWG0404272

Control Date %Rec Limits Note Surrogate Name Analyzed 0 Bromofluorobenzene 62-133 11/20/04 **Outside Control Limits** 

Comments:

Analytical Results

Client: Project:

PW Environmental

Bauer Manufacturing-REM EX

Sample Matrix:

Soil

Service Request: L0402369

Date Collected: NA Date Received: NA

Gasoline Range Organics (GRO)

Sample Name: Lab Code:

Method Blank

LWG0404265-3

Units: mg/Kg Basis: Wet

Extraction Method:

EPA 5035

Level: Low

Analysis Method:

8015B

Date Date Extraction

•				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline	ND U	0.10	0.045	1	11/20/04	11/20/04	LWG0404265	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	91	58-119	11/20/04	Acceptable

Analytical Results

Client: Project: PW Environmental

Bauer Manufacturing-REM EX

Sample Matrix:

Soil

Service Request: L0402369

Date Collected: NA

Date Received: NA

Gasoline Range Organics (GRO)

Sample Name:

Method Blank

Lab Code:

LWG0404272-3

Units: mg/Kg Basis: Wet

**Extraction Method:** 

EPA 5035

Analysis Method:

8015B

Level: Med

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline	ND U	5.0	2.3	1	11/20/04	11/20/04	LWG0404272	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	96	62-133	11/20/04	Acceptable

Comments:

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SuperSet Reference:

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RR7965

QA/QC Report

Client:

PW Environmental

Service Request: L0402369

Project:

Bauer Manufacturing-REM EX

Sample Matrix:

**Surrogate Recovery Summary** Gasoline Range Organics (GRO)

**Extraction Method:** 

EPA 5035

Analysis Method:

8015B

Units: PERCENT

Level: Low

Sample Name	Lab Code	Sur1
EX4-1	L0402369-001	377 *
_ EX4-2	L0402369-002	76
Method Blank	LWG0404265-3	91
Lab Control Sample	LWG0404265-1	98
Duplicate Lab Control Sample	LWG0404265-2	99

Surrogate Recovery Control Limits (%)

Sur1 = Bromofluorobenzene

58-119

Results flagged with an asterisk (\*) indicate values outside control criteria. Results flagged with a pound (#) indicate the control criteria is not applicable.

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QA/QC Report

Client:

PW Environmental

Project:

Bauer Manufacturing-REM EX

Sample Matrix:

Soil

Surrogate Recovery Summary Gasoline Range Organics (GRO)

Extraction Method:

EPA 5035

Analysis Method:

8015B

Units: PERCENT

Level: Med

Service Request: L0402369

Sample Name	Lab Code	Sur1
EX4-3	L0402369-003	0 D #
Method Blank	LWG0404272-3	96
Lab Control Sample	LWG0404272-1	118
Duplicate Lab Control Sample	LWG0404272-2	115

Surrogate Recovery Control Limits (%)

Sur1 = Bromofluorobenzene

62-133

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:

PW Environmental

Project:

Bauer Manufacturing-REM EX

Result

0.919

Sample Matrix:

Soil

Service Request: L0402369

Date Extracted: 11/20/2004

**Date Analyzed:** 11/20/2004

Lab Control Spike/Duplicate Lab Control Spike Summary Gasoline Range Organics (GRO)

%Rec

92

**Extraction Method: Analysis Method:** 

**Analyte Name** 

Gasoline

EPA 5035 8015B

Units: mg/Kg Basis: Wet

Extraction Lot: LWG0404265

1

Level: Low

20

Lab Control Sample

LWG0404265-1 Lab Control Spike

Expected

1.00

Duplicate Lab Control Sample

1.00

LWG0404265-2

**Duplicate Lab Control Spike** 

0.925

%Rec **RPD** Limits **RPD** Limit Result Expected %Rec

76-117

92

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:

PW Environmental

Project:

Bauer Manufacturing-REM EX

Sample Matrix:

Soil

Service Request: L0402369

Date Extracted: 11/20/2004 **Date Analyzed:** 11/20/2004

Lab Control Spike/Duplicate Lab Control Spike Summary

%Rec

80

Gasoline Range Organics (GRO)

**Extraction Method:** 

EPA 5035

Analysis Method:

Analyte Name

Gasoline

8015B

Units: mg/Kg

Basis: Wet

Level: Med

Extraction Lot: LWG0404272

Lab Control Sample

LWG0404272-1

Duplicate Lab Control Sample

LWG0404272-2

**Duplicate Lab Control Spike** 

%Rec **RPD** RPD Limits Limit

Lab Control Spike

Result Expected

102

81.8

Result 85.8

Expected 102

74-111

%Rec

84

5

20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

20

Form 3C - Organic

SuperSet Reference: RR7965

Page

1 of

Printed: 11/23/2004 07:55:18 P:\STEALTH\CRYSTAL.RPT\Form3DLC.rpt

Analytical Report

Client:

PW Environmental

Project:

Bauer Manufacturing-REM EX

Sample Matrix:

Service Request: L0402369

Date Collected: 11/17/04

Date Received: 11/17/04

Lead, Total

Prep Method:

**EPA 3050B** 

Analysis Method:

6020

Units: mg/Kg (ppm) Basis: Wet

Test Notes:

Sample Name	Lab Code	PQL	MDL	Dilution Factor	Date Digested	Date Analyzed	Result	Result Notes
EX4-1	L0402369-001	0.4	0.04	1	11/29/04	11/30/04	12	
EX4-2	L0402369-002	0.4	0.04	1	11/29/04	11/30/04	6.4	
EX4-3	L0402369-003	0.4	0.04	1	11/29/04	11/30/04	13	
Method Blank	L041129-MB2	0.4	0.04	1	11/29/04	11/30/04	ND	

Approved By: \_

\_\_\_ Date: \_\_/2/5/04

1A/020597p

QA/QC Report

Client:

PW Environmental

Project:

Bauer Manufacturing-REM EX

Sample Matrix:

Service Request: L0402369

Date Collected: NA

Date Received: NA Date Digested: 11/29/04

Date Analyzed: 11/30/04

Matrix Spike/Duplicate Matrix Spike Summary

Lead, Total

Sample Name:

Batch QC

Units: mg/Kg (ppm)

Lab Code:

L0402405-001MS

L0402405-001DMS

Basis: Wet

Test Notes:

Percent Recovery

	Prep	Analysis		Spike	Level	Sample	Spike	Result			CAS Acceptance	Relative Percent	Result
Analyte	Method	Method	PQL	MS	DMS	Result	MS	DMS	MS	DMS	Limits	Difference	Notes
Lead, Total	EPA 3050B	6020	0.4	100	100	44.4	156	188	112	144	41-124	19	MlA

MIA

MS/DMS outside of acceptance limits. The LCS was acceptable; therefore, data was approved.

Approved By:

02369icp.bel - DMS 12/1/04

DMS/020597p

55 Date: 12/5/04

22

IMETCLTS.XLT

QA/QC Report

Client:

PW Environmental

Project:

Bauer Manufacturing-REM EX

LCS Matrix:

Soil

Service Request: L0402369

Date Collected: NA
Date Received: NA

Date Digested: 11/29/04

Date Analyzed: 11/30/04

Laboratory Control Sample Summary

Lead, Total

Sample Name:

Lab Control Sample

Lab Code:

L041129-LCS

Units: mg/Kg (ppm)

Basis: NA

Test Notes:

						CAS Percent Recovery	
Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	Acceptance Limits	Result Notes
Lead, Total	EPA 3050B	6020	100	95.5	96	81-105	

02369icp.bs1 - LCS 12/1/04

23

IMETCLTS XLT

# FIVIRONMENTAL

230 DOVE COURT • SANTA PAULA • CALIFORNIA • 93060 | 805 | 656-4677 • (805 | 525-5563 • FAX (805 | 525-2896

CHAIN OF CUSTODY RECORD

Odor, Staining, Other TAT, etc. PID Reading, Orange County **つのべ** AHS7 AH 84 AH-45 HZUA :IAI KCEHD County Kern Lab Filter TPHG/BTEX/MTBE (Carb 410-T03) TIME TPHG/BTEX/OXYG/EOH 8260B San Bernardino ANALYSIS REQUESTED County DATE WITLOW Ethanol 8260B Ethanol/Methanol 8015B Metals: CAM 17 PP13 RWOCB Coast [043] Dissolved 6010/6020/742] STLC 85928 Lahontan 8590B EDB' OXXC BTEX, 8015M FC 1PH-Char M2108 LOW Level 8015M Los Angeles Lab: 6,45 WS108 Q-H91 M2108 **PSD-LUFT** S.B. CO NUMBER OF CONTAINERS Sample Matrix -9040 Required #ARLS to: % % <u>.نۇ</u> ক্ (signature)
RECEIVED BY: PROJECT NAME: Banch Manufacturing - Ran Ex VCLUFT RECEIVED BY: (signature) SKO EX TIME 11/1769 DATE LISTCF

LEDF-COELT

ON NONE DEPTH 25 ڡ PROJECT ADDRESS: 1140 South Southern Siddun! SAMPLE LOCATION Method of shipment, additional Notec Note Fax preliminary data ASAP SAMPLER SIGNATURE: PROJECT MANAGER: RELINQUISHED BY. RELINOUISHED BY EXH-2 SAMPLE EX4-'signature) (signature)

# SAMPLE RECEIPT FORM

Service Request No: L0402369 Client: PWE
Sample(s) delivered by: Client CAS Emp After Hours DHL
Golden State Overnight Fed X UPS Other Courier
Chain of Custody filled out accurately? Yes No (See Comments)
Appropriate sample volume and containers? Yes No(See Comments)
Sufficient labeling on container(s)?  Yes No(See Comments)  Sufficient labeling on container(s)?  Yes No(See Comments)
Container(s) supplied by CAS?  Yes No(See Comments)
Custody seal(s) intact? N/A Yes No (See Comments)
Trip Blank(s) received Yes No
If Trip Blank was supplied by CAS, record serial #TB
Temperature of sample(s)/cooler °C Temp Blank? Y of N (Circle One)
Voa's Marked Preserved? Yes No Filled Properly? Yes No (See Comments)
Preserved Bottles Requiring pH check(s)? Yes Appropriate Preservation? Yes No
RUSH Turn around time? Yes Notified Date & Time
Short Hold-Time Analysis (check all that apply)
ASAP         Res Cl         D.O         Flash         Diss S2-         Ferrous Fe           24HR         pH         Odor         Cr+6           48HR         BOD         Color         MBAS         Nitrate           Nitrite         O-PO4         Sett Sol         Turbidity
72HR , Vapors
Notified Date & Time
Container(s) received and their preservative(s):
Container(s) received and their preservative(s):  1402JAn M  1-3- 65NCA)
1-3- 65pcans
1-3- 6ENCERS  Comments Ded Dee was Natival West Evan On 11/17/24 At 1500. Encores transferred to Freezer
1-3- 6Epicans  Comments Dect Decemas Natival About Errown
1-3- 6ENCERS  Comments Ded Dee was Natival West Evan On 11/17/24 At 1500. Encores transferred to Freezer



December 16, 2004

Robert Orlando PW Environmental 230 Dove Court Santa Paula, CA 93060

RE: **Bauer & Collins Property** 

Dear Robert:

Enclosed are the results of the samples submitted to our laboratory on December 6, 2004. For your reference, these analyses have been assigned our service request number L0402469.

All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed. Columbia Analytical Services is not responsible for use of less than the complete report. Your report contains 17 pages

Columbia Analytical Services is certified for environmental analyses by the California Department of Health Services (certificate number: 1296A); NELAP (certificate number: 02115CA); Los Angeles County Laboratory ID (No. 10151); and Arizona Department of Health Services (License number: AZ0136 and AZ0544).

If you have any questions, please call me at (818) 587-5550, extension 310.

Respectfully submitted,

Columbia Analytical Services, Inc.

Stuart Sigman

**Project Chemist** 

SS/EAB

### Columbia Analytical Services, Inc.

Acronyms 8015M California DHS LUFT Method **ASTM** American Society for Testing and Materials BOD Biochemical Oxygen Demand BTEX Benzene/Toluene/Ethylbenzene/Xylenes CAM California Assessment Metals CAS Number Chemical Abstract Service Registry Number CFC Chlorofluorocarbon COD Chemical Oxygen Demand CRDL Contract Required Detection Limit D Detected; result must be greater than zero. DLDetected; result must be greater than the detection limit. DLCS **Duplicate Laboratory Control Sample DMS** Duplicate Matrix Spike DOH or DHS Department of Health Services **ELAP Environmental Laboratory Accreditation Program EPA** U.S. Environmental Protection Agency GCGas Chromatography GC/MS Gas Chromatography/Mass Spectrometry IC Ion Chromatography **ICB** Initial Calibration Blank sample **ICP** Inductively Coupled Plasma atomic emission spectrometry **ICV** Initial Calibration Verification sample LCS Laboratory Control Sample LUFT Leaking Underground Fuel Tank Modified M **MBAS** Methylene Blue Active Substances MDL Method Detection Limit MRL Method Reporting Limit MS Matrix Spike **MTBE** Methyl-tert-Butyl Ether NA Not Applicable NC Not Calculated ND None Detected at or above the Method Reporting/Detection Limit (MRL/MDL) NTU Nephelometric Turbidity Units ppb Parts Per Billion Parts Per Million ppm **PQL** Practical Quantitation Limit QA/QC Quality Assurance/Quality Control Resource Conservation and Recovery Act **RCRA RPD** Relative Percent Difference SIM Selected Ion Monitoring Standard Methods for the Examination of Water and Wastewater 18th Ed., 1992. SM STLC Solubility Threshold Limit Concentration SW Test Methods for Evaluating Solid Waste, Physical/Chemical MethodsSW-846, Third Edition, 1986 and as amended by Updates I, II, IIA, and IIB. **TCLP** Toxicity Characteristics Leaching Procedure TDS Total Dissolved Solids TPH Total Petroleum Hydrocarbons **TRPH** Total Recoverable Petroleum Hydrocarbons TSS Total Suspended Solids TTLC Total Threshold Limit Concentration VOA Volatile Organic Analyte(s) Qualifiers Undetected at or above MDL/MRL (PQL). Estimated concentration. Analyte detected above MDL but below MRL (PQL). Hit above MRL (PQL) also found in Method Blank.

U J В E Analyte concentration above high point of ICAL. D Result from dilution. X See case narrative.

Client:

PW Environmental

Project:

Bauer & Collins Property

Sample Matrix:

Soil

Service Request No.: L0402469

Date Received:

12/6/04

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

### Sample Receipt

Soil samples were received for analysis at Columbia Analytical Services on 12/6/04. No discrepancies were noted upon initial sample inspection. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored at 4°C upon receipt at the laboratory.

### Gasoline Range Organics by EPA Method 8015B

No anomalies were encountered.

Date 12/16/04 Approved by\_

Client: Project:

PW Environmental Bauer & Collins Property

Service Request:

L0402469

Cover Page - Organic Analysis Data Package Gasoline Range Organics (GRO)

		Date	Date
Sample Name	Lab Code	Collected	Received
EX5-1	L0402469-001	12/06/2004	12/06/2004
EX5-2	L0402469-002	12/06/2004	12/06/2004
EX5-3	L0402469-003	12/06/2004	12/06/2004
EX5-4	L0402469-004	12/06/2004	12/06/2004
EX5-5	L0402469-005	12/06/2004	12/06/2004
EX5-6	L0402469-006	12/06/2004	12/06/2004
EX5-7	L0402469-007	12/06/2004	12/06/2004
EX5-8	L0402469-008	12/06/2004	12/06/2004

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Name: Stuart Sigman

Title: Project Chemist

Cover Page - Organic

Page 1 of

Analytical Results

Client:

PW Environmental

Project:

Bauer & Collins Property

Sample Matrix:

Soil

Service Request: L0402469 Date Collected: 12/06/2004

Date Received: 12/06/2004

Gasoline Range Organics (GRO)

Sample Name:

EX5-1

Lab Code:

L0402469-001

**Extraction Method:** 

EPA 5035

Units: mg/Kg

Basis: Wet

Level: Low

Analysis Method:

8015B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline	0.19	0.087	0.045	1	12/07/04	12/07/04	LWG0404412	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	111	58-119	12/07/04	Acceptable

Comments:

Analytical Results

Client: Project: PW Environmental

Sample Matrix:

Bauer & Collins Property

Service Request: L0402469 **Date Collected:** 12/06/2004

Date Received: 12/06/2004

Gasoline Range Organics (GRO)

Sample Name:

EX5-2

Lab Code:

L0402469-002

Extraction Method:

EPA 5035

Units: mg/Kg

Basis: Wet

Level: Low

Analysis Method:

8015B

		201		Dilution	Date	Date	Extraction	<b>N</b> 7 .
Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline	ND U	0.090	0.045	1	12/07/04	12/07/04	LWG0404412	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	61	58-119	12/07/04	Acceptable

6

Form 1A - Organic

1 of 1 Page

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Merged

SuperSet Reference: RR8117

**Analytical Results** 

Client:

PW Environmental

Project:

Bauer & Collins Property

Sample Matrix:

Soil

Service Request: L0402469

Date Collected: 12/06/2004

**Date Received:** 12/06/2004

Gasoline Range Organics (GRO)

Sample Name:

EX5-3

Lab Code:

L0402469-003

**Extraction Method:** 

Analysis Method:

EPA 5035

8015B

Units: mg/Kg

Basis: Wet

Level: Low

				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	PQL	_MDL_	Factor	Extracted	Analyzed	Lot	Note
Gasoline	ND U	0.088	0.045	1	12/07/04	12/07/04	LWG0404412	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	79	58-119	12/07/04	Acceptable

Comments:

Analytical Results

Client: Project: PW Environmental

Bauer & Collins Property

Sample Matrix:

Soil

Service Request: L0402469

Date Collected: 12/06/2004

Date Received: 12/06/2004

Gasoline Range Organics (GRO)

Sample Name:

EX5-4

Lab Code:

L0402469-004

Extraction Method:

EPA 5035

Analysis Method:

8015B

Units: mg/Kg

Basis: Wet

Level: Low

Dilution Date Date Extraction Analyte Name **PQL MDL** Factor Extracted Analyzed Lot Note Result Q

Gasoline ND U 0.093 0.045 12/07/04 12/07/04 LWG0404412

Control Date %Rec Limits Note Surrogate Name Analyzed 74 58-119 12/07/04 Bromofluorobenzene Acceptable

Comments:

8

Form 1A - Organic

1 of 1 Page

Printed: 12/07/2004 08:57:10 P:\STEALTH\CRYSTAL.RPT\Form1m.rpt

Merged

SuperSet Reference: RR8117

Analytical Results

Client: Project: PW Environmental

Bauer & Collins Property

Sample Matrix:

Soil

Service Request: L0402469

Date Collected: 12/06/2004

**Date Received:** 12/06/2004

Gasoline Range Organics (GRO)

Sample Name:

EX5-5

Lab Code:

L0402469-005

Extraction Method: Analysis Method:

EPA 5035 8015B

Units: mg/Kg

Basis: Wet

Level: Low

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline	ND U	0.081	0.045	1	12/07/04	12/07/04	LWG0404412	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	81	58-119	12/07/04	Acceptable

Comments:

Printed: 12/07/2004 08:57:10 P:\STEALTH\CRYSTAL.RPT\Form1m.rpt

Merged

9 Form 1A - Organic

Page

RR8117

SuperSet Reference:

1 of 1

Analytical Results

Client: Project: PW Environmental

Sample Matrix:

Bauer & Collins Property

Soil

Service Request: L0402469

**Date Collected:** 12/06/2004

Date Received: 12/06/2004

Gasoline Range Organics (GRO)

Sample Name:

EX5-6

Lab Code:

L0402469-006

Extraction Method: Analysis Method:

EPA 5035 8015B

Units: mg/Kg

Basis: Wet

Level: Low

Analyte Name

Gasoline

Result Q ND U

**PQL** 0.097 **MDL** 0.045

Dilution Date **Factor** Extracted 12/07/04

Date Analyzed 12/07/04

Extraction Lot

Note LWG0404412

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	76	58-119	12/07/04	Acceptable	

Comments:

Printed: 12/07/2004 08:57:11 P:\STEALTH\CRYSTAL.RPT\Form1m.rpt

10 Form 1A - Organic

Page

1 of 1

SuperSet Reference: RR8117

Analytical Results

Client: Project: PW Environmental

Bauer & Collins Property

Sample Matrix:

Soil

Service Request: L0402469

**Date Collected:** 12/06/2004

Date Received: 12/06/2004

Gasoline Range Organics (GRO)

Sample Name:

EX5-7

Lab Code:

L0402469-007

**Extraction Method:** Analysis Method:

EPA 5035

Units: mg/Kg

Basis: Wet

Level: Low

8015B

	_			Dilution	Date	Date	Extraction	<b>N</b> 7 4.
Analyte Name	Result Q	PQL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline	0.14	0.088	0.045	1	12/07/04	12/07/04	LWG0404412	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Bromofluorobenzene	83	58-119	12/07/04	Acceptable

Comments:

Printed: 12/07/2004 08:57:12

Analytical Results

Client: Project: Sample Matrix:

PW Environmental

Bauer & Collins Property

Soil

Service Request: L0402469 Date Collected: 12/06/2004

Date Received: 12/06/2004

Gasoline Range Organics (GRO)

Sample Name:

EX5-8

Lab Code:

Gasoline

L0402469-008

ND U

**Extraction Method:** Analysis Method:

EPA 5035 8015B

Units: mg/Kg

Basis: Wet

Level: Low

LWG0404412

Dilution Date Date Extraction **Factor** Analyte Name Result Q **PQL** MDL Extracted Analyzed Lot Note

0.045

12/07/04

12/07/04

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
Bromofluorobenzene	66	58-119	12/07/04	Acceptable	

0.087

Comments:

**Analytical Results** 

Client:

PW Environmental

Project:

Bauer & Collins Property

Sample Matrix:

Service Request: L0402469

Date Collected: NA

Date Received: NA

Gasoline Range Organics (GRO)

Sample Name:

Method Blank

Lab Code:

LWG0404412-3

**Extraction Method:** 

EPA 5035

Units: mg/Kg

Basis: Wet

Level: Low

Analysis Method:

8015B

**PQL** 

**MDL** 

Dilution Factor

Date Extracted 12/06/04

Date Analyzed Extraction

Note

**Analyte Name** Gasoline

Result Q ND U

0.10

0.045

12/06/04

Lot LWG0404412

Surrogate Name

Bromofluorobenzene

%Rec 99

Limits 58-119

Control

12/06/04

Date

Analyzed

Note

Acceptable

13

Form 1A - Organic

SuperSet Reference:

Page

1 of

Printed: 12/07/2004 08:57:14 

Comments:

Merged

RR8117

QA/QC Report

Client: Project:

Sample Matrix:

PW Environmental

Bauer & Collins Property

Soil

Service Request: L0402469

**Surrogate Recovery Summary** Gasoline Range Organics (GRO)

Extraction Method:

EPA 5035

Units: PERCENT Level: Low

Analysis Method: 8015B

Sample Name Lab Code Sur1 EX5-1 L0402469-001 111 EX5-2 L0402469-002 61 EX5-3 79 L0402469-003 EX5-4 74 L0402469-004 EX5-5 81 L0402469-005 EX5-6 76 L0402469-006 EX5-7 83 L0402469-007 EX5-8 66 L0402469-008 Method Blank LWG0404412-3 99 Lab Control Sample 104 LWG0404412-1 Duplicate Lab Control Sample LWG0404412-2 107

Surrogate Recovery Control Limits (%)

Sur1 = Bromofluorobenzene

58-119

Results flagged with an asterisk (\*) indicate values outside control criteria. Results flagged with a pound (#) indicate the control criteria is not applicable.

14

Form 2A - Organic

Printed: 12/07/2004 08:57:18

QA/QC Report

Client: Project: PW Environmental

Bauer & Collins Property

Sample Matrix:

Soil

Service Request: L0402469

**Date Extracted: 12/06/2004** 

**Date Analyzed:** 12/06/2004

Lab Control Spike/Duplicate Lab Control Spike Summary Gasoline Range Organics (GRO)

Extraction Method: Analysis Method:

EPA 5035

8015B

Units: mg/Kg Basis: Wet

Level: Low

Extraction Lot: LWG0404412

Lab Control Sample

LWG0404412-1

Duplicate Lab Control Sample

LWG0404412-2

Lab Control Spike **Duplicate Lab Control Spike** %Rec RPD RPD Limits Limit %Rec Expected %Rec Analyte Name Result Expected Result 0.912 0.936 94 Gasoline 1.00 91 1.00 76-117 3 20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

# ENVIRONMENTAL LO4021489 CHAIN OF CUSTODY RECORD

230 DOVE COURT • SANTA PAULA • CALIFORNIA • 93060
[805] 656-4677 • [805] 525-5563 • FAX [805] 525-2896

PROJECT ADDRESS: 1140 S. Wells 22.  PROJECT ADDRESS: 1140 S. Wells 22.  PROJECT ADDRESS: 1140 S. Wells 22.  PROJECT MANAGER: T. Moccon Mocol Metals: CAM 17 PP13  SAMPLER SIGNATURE: Moccon Mocol Mocol Metals: CAM 17 PP13  SAMPLER SIGNATURE: Mocol Mocol Mocol Mocol Metals: CAM 17 PP13  SAMPLER SIGNATURE: Mocol Mo	ANALYSIS REQUESTED
Manager: T. Wolfort       Wolfort       P.228-208       OF       OF <td>enates 82608/ od 6010/6020/</td>	enates 82608/ od 6010/6020/
SOUTHOUSE. CHOULLUSTS P. 286-188 BY P. 144 BEE DATE TIME SAMPLE DATE TIME TO SAIL 3 X X X X X X X X X X X X X X X X X X	ILBE (CS) ILBE (
SAMPLE         SAMPLE LOCATION         DEPTH         DATE         TIME         SAMPLE SAMPLE LOCATION         DEPTH         DATE         TIME         SAMPLE P P P P P P P P P P P P P P P P P P	Total /C
EX5-1 Southern Wall 4" 12/404 10:50 Soil 3 X X $EX5-2$ Southern Wall 4" 12/404 10:50 Soil 3 X X $EX5-3$ Bottom/SouthEast 8" 12/4/04 11:03 Soil 3 X X $EX5-4$ East wall 6" 12/4/04 11:15 Soil 3 X X $EX5-5$ Bottom 8" 12/4/04 11:25 Soil 3 X X $EX5-5$ South an Wall 4 7" 12/4/04 11:00 Soil 3 X X	Lead File
EXS-2 Southern Wall 4" 12/6/04 10:50 Soil 3 XX  EXS-3 Botton/SouthEast 8" 12/6/04 11:03 Soil 3 XX  EXS-4 East wall 6" 12/6/04 11:15 Soil 3 X X  EXS-5 Bottom 8" 12/6/04 11:25 Soil 3 X X  EXS-6 South an Wall 4 7" 12/6/04 11:00 Soil 3 X X	
Easthon/SouthEast 8' 12/6/04 11:03 Soil 3 XX  East would 6' 12/6/04 11:15 Soil 3 X X  Bottom 8' 12/6/04 11:25 Soil 3 X X  South an would 7' 12/6/04 11:40 Soil 3 X X	S Pos
East wall 6' 12/6/04 11:15 Soil 3 X X  Bottom 8' 12/6/04 11:25 Soil 3 X X  South an wall 7' 12/6/04 11:40 Soil 3 X X  North Wall 7' 12/6/04 12:00 Soil 3 X X	
South an Word H 7' 12/6/04 17:00 Soil 3 X X  North Wall 7' 12/6/04 12:00 Soil 3 X X	95
South orn Ward/H 7' 12/6/04 11:40 Soil	
North Will 7' 12/6/04 12:00 Soil	4. A. S.
EX5-8 Northwell 3/ 12/6/6/12:35 Soil 3/X	
Model 1808 RECEIVED BY: WELLINGER 1	0421 194 /64 TIME 240
	S DATE 176/64 TIME 1355
Required MRLs to:   USTGF   Required MRLs to:   Lahontan   S.B. CO   Los Angeles   Lahontan   Lah	

# SAMPLE RECEIPT FORM

Service Request No: L040 2469 Client: PW LNV
Sample(s) delivered by: Client CAS Emp After Hours DHL
Golden State Overnight Fed X UPS Other Courier
Chain of Custody filled out accurately? Yes/ No(See Comments)
Appropriate sample volume and containers? Yes/ No(See Comments)
Sufficient labeling on container(s)? Yes/ No(See Comments)
Container(s) supplied by CAS? Yes No (See Comments)
Custody seal(s) intact? N/A \( \sqrt{\sqrt{N}} \) Yes \( \sqrt{No} \) (See Comments)
Trip Blank(s) received Yes No/
If Trip Blank was supplied by CAS, record serial #
Temperature of sample(s)/cooler °C Temp Blank? Y or N (direct One)
Voa's Marked Preserved? Yes No Filled Properly? Yes No (See Comments)
Preserved Bottles Requiring pH check(s)? Yes Appropriate Preservation? Yes No
RUSH Turn around time? Yes Notified Date & Time  > 600 4-1
Short Hold-Time Analysis (check all that apply)
ASAP         Res Cl D.O Flash Diss S2 Ferrous Fe           24HR         pH Odor Cr+6           48HR         BOD Color MBAS Nitrate           Nitrite         O-PO4 Sett Sol Turbidity           72HR         Vapors
Notified Date & Time
Container(s) received and their preservative(s):
$-1 \rightarrow 8 = 3 en cores$
Comments Rush
Initials, Date, Time Lk 12/6/2 114 14/8 r:\sr_forms\cooler.doc Rev. 2/25/02